

# **Audit**

# **Report**



OFFICE OF THE INSPECTOR GENERAL

**NAVY REQUIREMENTS FOR CURRENTLY PROCURED  
WHOLESALE INVENTORIES OF REPARABLE ITEMS**

Report Number 93-049

February 1, 1993

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**The following acronyms are used in this report.**

ASO.....	Aviation Supply Office
GAO.....	General Accounting Office
HSC.....	hardware system command
ICP.....	inventory control point
NAVAIR.....	Naval Air Systems Command
NAVSEA.....	Naval Sea Systems Command
NSN.....	national stock number
OPNAV.....	Office of the Chief of Naval Operations
PERA.....	Planning and Engineering for Repairs and Alterations Command
SPAWAR.....	Space and Naval Warfare Systems Command
SPCC.....	Ships Parts Control Center
THF.....	transaction history file
UICP System.....	Uniform Inventory Control Point Computer System



INSPECTOR GENERAL  
DEPARTMENT OF DEFENSE  
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February 1, 1993

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (PRODUCTION  
AND LOGISTICS)  
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL  
MANAGEMENT)

SUBJECT: Audit Report on the Navy Requirements for  
Currently Procured Wholesale Inventories of  
Reparable Items (Report No. 93-049)

We are providing this final report for your information and use. It addresses the purchase of reparable items by the Navy inventory control points. This is the second of three reports we plan to issue on procurement of reparable items. A separate report was issued to the Air Force and another report will be issued to the Army. Comments from the Navy on a draft of this report were considered in preparing this final report.

DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. Therefore, we request that the Navy provide final comments on the unresolved recommendations and monetary benefits by April 2, 1993. See the "Status of Recommendations" section at the end of the finding for unresolved recommendations and specific requirements for your comments. Recommendations and potential monetary benefits are subject to resolution in accordance with DoD Directive 7650.3 in the event of nonconcurrence. We also ask that your comments indicate concurrence or nonconcurrence with the internal control weaknesses highlighted in Part I.

The courtesies extended to the audit staff are appreciated. If you have any questions concerning this audit, please contact Mr. James Helfrich, Program Director, or Mr. Joel Chaney, Project Manager, in our Columbus Office, at (614) 692-4141 (DSN 850-4141). The planned distribution of this report is identified in Appendix G.

A handwritten signature in cursive script, reading "E. Jones", is positioned above the typed name.

Edward R. Jones  
Deputy Assistant Inspector General  
for Auditing

Enclosure

cc:  
Secretary of the Navy

Office of the Inspector General, DoD

Audit Report No. 93-049  
(Project No. OLE-0078.03)

February 1, 1993

NAVY REQUIREMENTS FOR CURRENTLY PROCURED  
WHOLESALE INVENTORIES OF REPARABLE ITEMS

EXECUTIVE SUMMARY

**Introduction.** In September 1990, the Navy's two inventory control points (ICPs) were in the process of procuring approximately \$863 million of stock for 11,308 depot level reparable line items. These purchases were initiated after item managers reviewed requirements computations generated by the Navy's automated requirements determination system.

**Objectives.** The audit objectives were to determine whether quantities of reparable items being purchased were warranted by anticipated requirements and whether internal controls over the determination of those procurement requirements were effective.

**Audit Results.** Of the \$520.1 million of purchases reviewed, the Navy ICPs were prematurely or unnecessarily purchasing approximately \$110.9 million (21 percent) of reparable assets. Purchase requests valued at \$55.1 million were curtailed by the ICPs while the audit was in progress. Of the \$55.1 million in purchase reductions, \$33.0 million was initiated by the ICPs and Navy hardware system commands, and the remaining \$22.1 million was curtailed in response to our audit.

- The Navy ICPs insufficiently, prematurely, or unnecessarily initiated purchase requests to acquire materiel for wholesale inventory. As a result, investment in wholesale inventories was excessive or inadequate (Finding A).

- Item managers at the ICPs could not provide requirements data or rationale to support over 50 percent of the purchases we reviewed. As a result, we could not substantiate the reasonableness of the manager's purchase decision (Finding B).

**Internal Controls.** Internal controls were not effective to ensure that the ICPs were purchasing only those quantities of items needed to satisfy requirements. See Findings A and B for details on these material weaknesses and Part I for a description of the controls assessed.

**Potential Benefits of Audit.** We identified potential monetary benefits of \$71.7 million, which represents the estimated value of unnecessary purchases (see Appendix E).

**Summary of Recommendations.** We recommended that policy and procedures be issued to improve coordination between the hardware systems commands and the ICPs, that guidance for verification of requirements be consolidated and issued, that internal controls over supervisory approval of purchase decisions be strengthened, and that the ICPs periodically review item manager compliance with the ICPs' policy for retention of requirements data supporting purchase decisions.

**Management Comments.** The Assistant Secretary of the Navy (Research, Development and Acquisition) concurred with the recommendations that guidance for verification of requirements be consolidated and issued, that the ICPs conduct periodic evaluations of the adequacy of supervisory review of item manager purchase decisions, and that the ICPs periodically review item manager compliance with policy for the retention of requirements data supporting purchase decisions. Planned actions are responsive to the recommendations. The Navy partially concurred with improving coordination between the hardware systems commands and the ICPs, requiring supervisory review of purchase decisions for high cost insurance items, and expanding the coverage of the ICPs' independent review function. The Navy nonconcurred with directing the Aviation Supply Office to implement DoD policy and formula for numeric stockage objective items and establishing programs implementing the DoD policy to reevaluate purchases prior to contract award. The Navy disagreed with the basis for and amount of potential monetary benefits in the draft audit report. We adjusted the amount based on discussions with and additional information provided by the Navy.

**Audit Response.** We request that the Navy reconsider its position and provide additional information as specified in the Status of Recommendations chart in Part II of the report. Comments are to be provided by April 2, 1993.

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This report was prepared by the Logistics Support Directorate, Office of the Assistant Inspector General for Auditing, DoD. Copies of the report can be obtained from the Secondary Reports Distribution Unit, Audit Planning and Technical Support Directorate, (703) 614-6303 (DSN 224-6303).

## PART I - INTRODUCTION

### Background

The Navy has two major inventory control points (ICPs): the Aviation Supply Office (ASO) and the Ships Parts Control Center (SPCC). The ICPs manage wholesale secondary items in support of military customers. Secondary items include both consumable items and depot level reparable items. Depot level reparable items are secondary items that are returned to a depot level repair activity when repair of the failed item exceeds field level maintenance capabilities, or items that are repaired by a depot level activity as part of the overhaul of a higher assembly or end item. ASO primarily manages materiel related to aviation systems and SPCC manages other Navy materiel.

On September 30, 1990, the ICPs were in the process of procuring approximately \$863 million of stock for 11,308 depot level reparable items. The procurement process at ASO and SPCC generally begins when the automated requirements computation system determines that the assets on-hand and due-in for an item have dropped to or below the item's reorder level. The automated system recommends the purchase of a quantity of materiel sufficient to refill the item's stockage objective. The inventory manager reviews the requirements computation and other relevant data to verify the accuracy of the computation before initiating a purchase request. Supervisory personnel review the requirements computation for purchases valued at \$150,000 or more at ASO and \$50,000 or more at SPCC. The approved purchase request serves as the authorization for the ICPs' procurement organization to buy the materiel.

### Objectives

The objectives of the audit were to determine whether quantities of reparable items to be bought on forthcoming procurements by the Navy wholesale ICPs were warranted by anticipated requirements and whether internal management controls over the determination of those procurement requirements were effective.

### Scope

We obtained data on active purchases as of September 30, 1990, from each of the Navy ICPs. We did not audit the reliability of the system from which the purchase data were extracted. We performed tests to ensure that purchases in process that were recorded in the system were accurate; and we adjusted the purchase universe, as discussed below. On September 30, 1990, the Navy ICPs had initiated procurements valued at approximately \$863 million for 11,308 line items. Our initial analysis indicated that 1,430 line items, which involved procurements

valued at over \$100,000 for each item, accounted for 80 percent of the value of the procurements in process. From the universe of 1,430 line items, we initially selected a sample of 107 line items, with purchases valued at \$229.4 million. Of the 107 items 21 did not meet the criteria of our review. We excluded those 21 items from further review because either the purchases were not in process at our sample cutoff date (for example, purchase requests were canceled or contracts were awarded) or the purchases related to items that were managed using consumable item management techniques. Our final audit sample was 86 line items involving purchases valued at \$188.3 million. We estimated that the Navy sample universe, after adjustments, was 1,056 line items with purchases valued at \$520.1 million. The audit sampling plan and results are discussed in Appendix A.

We examined requirements' documents, related to the purchases in process as of September 30, 1990, to evaluate the basis for the procurement decisions; and we evaluated requirements data that were effective at the time of audit to determine whether requirements supported continuation of the procurement. To determine whether the requirements forecasts were reasonable, we reviewed the accuracy of the forecasted demand rates, the propriety of nondemand based (additive) requirements, and the accuracy of on-hand asset and due-in asset balances. In addition, we selectively reviewed other requirements data and factors that affected the requirements forecast, such as past and future program data, survival and wearout rates, and repair cycle times.

The technical staff of the Audit Planning and Technical Support Directorate assisted in this audit. Analysts in the Quantitative Methods Division assisted in formulating a statistical sampling plan and in computing statistical projections.

This economy and efficiency audit was made from August 1990 through November 1991 in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD, and accordingly, included such tests of internal controls as were considered necessary. Activities visited or contacted during the audit are shown in Appendix F.

### **Internal Controls**

The audit identified material internal control weaknesses as defined by Public Law 97-255, Office of Management and Budget Circular A-123, and DoD Directive 5010.38. The ICPs' internal controls were not effective to ensure that unnecessary investments in wholesale repairable inventories did not occur. Recommendations A.1.a., A.1.b., A.2.c., A.2.d., A.2.e., A.2.f., B.1., and B.2. in this report, if implemented, will correct the weaknesses. Monetary benefits associated with these specific



recommendations could not be separately identified. Other potential monetary benefits of about \$71.7 million are identified in Appendix E. A copy of the final report will be provided to the senior official responsible for internal controls within the Navy.

#### **Prior Audit Coverage**

During the last 5 years, the Office of the Inspector General, DoD; the General Accounting Office (GAO); and the Naval Audit Service completed audits related to specific aspects of logistics management functions. Appendix D summarizes the principal audits that addressed management processes and controls over the acquisition of wholesale inventories or the development of requirements data that affected managers' decisions for the acquisition of materiel.

#### **Other Matters of Interest**

During the audit, the Navy canceled or reduced excessive purchases valued at over \$55.1 million related to 38 of our sampled items. The Navy Hardware System Commands and ICPs were responsible for purchase reductions valued at \$33.0 million. The other \$22.1 million in reductions occurred after we had discussed the erroneous or unjustified requirements with management. Management also increased purchase quantities valued at \$14.1 million related to three items after we identified erroneous data used in the computation.

Appendix B identifies purchases that we classified as excessive and insufficient and actions that were taken to curtail or increase those purchases. Appendix C identifies the underlying causes of the excessive and insufficient purchases.

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## PART II - FINDINGS AND RECOMMENDATIONS

### A. INSUFFICIENT, PREMATURE, AND UNNECESSARY PURCHASES OF REPARABLE ITEMS

The Navy's ICPs insufficiently, prematurely, or unnecessarily initiated purchase requests to acquire wholesale inventory of reparable items and did not promptly adjust purchases in-process in response to indicated changes in future requirements. These conditions occurred because coordination between the Navy Hardware System Commands (HSCs) and the ICPs was not adequate; system computed requirements objective for low demand, reliable items was excessive; the ICPs' guidance for verification of requirements data, before initiating purchases, was inadequate; supervisory personnel did not exercise effective oversight of item manager purchase decisions; and existing controls did not ensure the reduction of purchases when requirements decreased before contract award. As a result, of the \$520.1 million of materiel that the ICPs were purchasing, approximately \$110.9 million (21 percent) exceeded requirements. The \$110.9 million included \$32.1 million of premature and \$78.8 million of unnecessary purchases.

### DISCUSSION OF DETAILS

#### Background

The Navy ICPs' ability to maximize operational readiness or supply availability while minimizing inventory investment is dependent on their ability to accurately forecast when procurement actions should be initiated and how much materiel should be procured. The ICPs utilized the Uniform Inventory Control Point (UICP) Computer System to facilitate those determinations. The UICP System computes spare parts requirements and applies available assets against those requirements.

The UICP System receives data from a number of other Navy data systems. The UICP System uses requirements data to develop demand rates and depot maintenance replacement rates by relating historic usage of the item to historic program data (such as aircraft flying hours). The historic demand and replacement rates are applied to future program data to forecast usage. The UICP System also develops survival rates based on historic repair experience of the depot level repair activities. The survival rate represents the percentage of unserviceable assets inducted to depot overhaul that are returned to serviceable condition. When applied to forecast demand and usage of the item, the survival rate provides an estimate of assets that will need to be procured to replace attrition.

The ICPs are also dependent on data provided by the Navy's HSCs. The HSCs are the Naval Air Systems Command (NAVAIR), Naval Sea Systems Command (NAVSEA), and the Space and Naval Warfare Systems Command (SPAWAR). These commands provide the program and engineering data that affect future requirements. They also procure items to provide initial support for new or modified weapons systems. An effective interface between the ICPs and the systems commands is critical to the management of reparable items in the Navy.

DoD Instruction 4140.39, "Procurement Cycles and Safety Levels of Supply for Secondary Items," July 17, 1970, provides policy and general computation guidance for calculating procurement cycle and safety level requirements. Specific DoD guidance related to the computation of procurement cycles and safety levels for reparable items is not provided.

DoD Instruction 4140.55, "Procurement Lead Times for Secondary Items," December 9, 1985, establishes policy and prescribes uniform guidelines for defining and developing procurement lead times used in the determination of requirements. Procurement lead time is comprised of administrative lead time and production lead time. Administrative lead time begins when an item's wholesale asset level drops to or below the reorder point and ends on the date the contractual instrument is executed. The production lead time begins when administrative lead time is completed and ends when receipt of significant deliveries is confirmed by the storage activities.

DoD Directive 4140.59, "Determination of Requirements for Secondary Items After the Demand Development Period," June 13, 1988, establishes DoD stockage policies for wholesale level inventories and prescribes procedures for determining a stockage objective quantity. For demand based reparable items, the stockage objective quantity is equal to the sum of the safety level, production lead time, administrative lead time, and procurement cycle. The stockage objective also includes any protectable war reserve stocks and planned program requirements. The Directive provides that demand based items may be procured when assets on hand and on order are equal to or less than the sum of the safety level, lead time, and applicable protectable war reserve and planned program requirements.

On December 13, 1989, the Assistant Secretary of Defense (Production and Logistics) issued a memorandum, "Contract Terminations of Secondary Items No Longer Needed." This memorandum established DoD policy to reduce or cancel purchases before contract award when changes in requirements make all or part of the material being procured unneeded. The memo required the ICPs to establish procedures to manage, monitor and audit

termination actions, provide for appropriate records ensuring accountability of termination decisions, and reach and implement decisions promptly.

In July 1990, the Assistant Secretary of Defense (Production and Logistics) [ASD (P&L)] canceled DoD Instruction 4140.33, "Grouping of Secondary Items for Supply Management Purposes." This Instruction established uniform criteria for grouping secondary items to be accorded varying degrees of management intensity in the supply management process. In IG Audit Report No. 91-106, "Military Department Requirements for Currently Procured Wholesale Inventories for Consumable Items", June 28, 1991, we recommended that ASD (P&L) reissue the Instruction. ASD (P&L) responded that a new regulation, DoD Regulation 4140.1-R, would provide guidance for the intensity of review. However, as of November 1992, DoD had not issued the regulation.

#### Evaluation of Active Purchases

As of September 30, 1990, we estimated that the Navy ICPs were procuring materiel valued at approximately \$520.1 million for 1,056 line items, which involved procurements valued at over \$100,000 for each item. While the majority of this materiel was needed to support valid requirements, we estimated that premature or unnecessary quantities of materiel valued at \$110.9 million were being procured for 461 of those line items. We estimated that of the \$110.9 million, \$32.1 million was premature and \$78.8 million was unnecessary. By avoiding unnecessary purchases, we estimated that potential monetary benefits of \$68.2 million could have been realized. The \$10.6 million difference (\$78.8 million minus \$68.2 million) represents offsetting costs to repair unserviceable assets. Our estimates were based on the evaluation of active purchase requests for 86 sampled line items with purchases in process valued at \$188.3 million. (The criteria used to determine whether the purchase quantity of an item was premature or unnecessary are discussed in Appendix A).

On September 30, 1990, premature and unnecessary purchases were in process for 28 of the 86 sampled items for which audit results were used in the statistical projections. Excessive purchases for two other sampled items were initiated after September 30, 1990. Since these later purchases were not part of the audit universe, the audit results from examining those purchases were not used in the statistical projections. We were unable to render an opinion on the reasonableness of the ongoing purchase as of September 30, 1990, for 11 of the 86 sample items because either the ICP could not provide verifiable requirements data as of that date, or requirements were dependent upon critical management decisions by the Navy HSCs and those decisions had not been made as of that date. However, we obtained requirements

data for those items after September 30, 1990 and concluded that purchases in process were either insufficient or excessive for 7 of the 11 items.

We attributed the insufficient and excessive purchases for the 37 line items to inadequate coordination between Navy HSCs and the ICPs; inappropriate UICP System computed requirements for low demand, reliable items; inadequate guidance for verification of requirements data; ineffective management oversight of purchase decisions; and inadequate controls over the continuation of purchases when requirements decreased. Each is discussed below.

**Coordination between Navy HSCs and ICPs.** Excessive purchases for 4 of the 37 items resulted from inadequate coordination between the Navy HSCs and the ICPs. The ICPs' ability to accurately forecast requirements for these items was contingent upon receiving prompt and accurate data from the HSCs. However, the HSCs did not effectively coordinate with the ICPs when the HSCs revised weapon system program plans and approved engineering design changes. In addition, the HSCs did not revise provisioning estimates based on demand and usage data accumulated during the interim contract support period; and did not coordinate HSC purchase of items managed by the ICPs.

**Revision of weapon systems program plans.** In one case, an excessive purchase occurred because SPAWAR did not advise SPCC that a weapon system program plan revision would impact requirements and asset availability for a satellite communication system being installed on submarines. In 1988, SPAWAR purchased 122 modems (national stock number [NSN] 5895-01-281-2401) for installation on submarines and use at shore based sites. In 1989, SPCC initiated a purchase for 80 modems valued at \$3.8 million to support retail allowances and fill initial wholesale inventory requirements. The purchase quantity was computed using a demand rate based on provisioning estimates.

In April 1990, the Chief of Naval Operations approved plans to decommission some of the submarines. As a result, 34 of the 122 modems purchased by SPAWAR were no longer required for installation. However, SPAWAR did not revise the operational requirement to delete the installation of modems on the decommissioned submarines. Had the operational requirements been revised, SPAWAR could have released the 34 assets to SPCC to support wholesale inventory requirements. We also concluded that the provisioning demand rate for the modem was overstated. The demand rate was not based on the population of the equipment to be supported during the procurement lead time and procurement cycle time periods, as specified in the revised weapon system program plans. SPCC canceled the \$3.8 million modem purchase in February 1992, after determining that SPAWAR had sufficient assets to support all future requirements.

**Approval of engineering design changes.** NAVAIR did not provide engineering and requirements data for ASO to recognize the effect of engineering design changes on procurement requirements for an electronic control unit (NSN 2925-01-277-3508). ASO was purchasing 72 electronic control units valued at \$1,122,027 to support the T700-401 engine on the SH-60 aircraft. The purchase of the electronic control unit should have been canceled in May 1990, when NAVAIR approved a program to modify the T700-401 engine to the T700-401CE engine. The approved modification schedule provided for modification of the engines by July 1992, before the assets being procured could be delivered.

In addition to purchasing 72 control units, ASO was purchasing 98 electronic control units (NSN 2925-01-299-2232) configured to support the T700-401CE engine. We concluded that this purchase was also excessive. NAVAIR did not advise ASO to consider assets, held by Navy activities to support planned program requirements for NSN 2925-01-277-3508, that could be modified to the configuration of NSN 2925-01-299-2232. As a result, ASO's requirements computation understated assets available to satisfy the computed requirement for NSN 2925-01-299-2232. On April 26, 1991, ASO canceled the purchase of 72 electronic control units.

**Revision of provisioning estimates.** An excessive purchase occurred for one item because NAVAIR did not revise the provisioning maintenance replacement rate based on actual demand and usage data accumulated during the interim contractor support period. On September 30, 1990, an item manager was purchasing 253 multi-purpose color displays (Navy Item Control Number 5960-LL-NEE-A190) valued at \$10.6 million. The sampled purchase was ASO's initial purchase of the display based on estimated replacement rates and maintenance factors provided by NAVAIR. Although DoD Instruction 4140.42 required that NAVAIR adjust the provisioning estimates based on actual experience during the demand development period, NAVAIR did not adjust the provisioning estimates or provide usage data to ASO. Additionally, the item manager did not attempt to determine whether continued use of the maintenance replacement rate and maintenance factors was appropriate.

We questioned the continued use of the provisioning data, and in November 1990, ASO canceled the sampled purchase. After obtaining demand and usage data from NAVAIR, ASO revised requirements factors for the display. The usage data supported replacement rates that were significantly lower than the provisioning estimates. On October 1, 1991, ASO initiated a purchase for 139 displays valued at \$7.6 million, a reduction of \$3.0 million from the original purchase.

**HSC purchase of ICP managed items.** In another case, the combined purchases by NAVSEA and SPCC were excessive, primarily because NAVSEA did not advise SPCC (the ICP) of a purchase initiated in November 1990. SPCC initiated purchases for a total of three Trident main propulsion shaft assemblies (NSN 2010-01-111-9593) in February and April 1990. The purchases were to support the scheduled maintenance program and emergency replacements for the shaft. SPCC's requirements objective was nine shafts (six shafts were previously procured). In November 1990, NAVSEA initiated the purchase of six additional shafts. NAVSEA's purchase was not recorded in the UICP System; therefore, it was not considered in SPCC's January 1991 decision to continue its purchase.

We questioned the basis for and need to continue the purchase of the nine shafts, and in March 1991 NAVSEA reduced its purchase from six to three shafts. The estimated value of the reduction was \$3.5 million. In August 1991, NAVSEA revised the requirements factors for the shaft and SPCC recomputed the requirements objective. Based on that computation, the Naval Supply System Command approved a requirements objective of 12 shafts. The revised requirements objective justified continuation of the purchases for six shafts (three by NAVSEA and three by SPCC). The Naval Supply System Command also established a process action team to determine whether the repair cycle time for the shaft could be reduced.

**Stockage objective for low demand, reliable items.** The UICP System's computation of demand based stockage levels was the principal cause of premature purchase for 2 of the 37 items and a contributing cause of premature purchases for 2 other sampled items. The UICP System at ASO did not classify low demand, reliable items as numeric stockage objective items and limit the stockage objective in accordance with the intent of DoD policy. Stockage levels and corresponding investment in wholesale inventories could be reduced by implementing the more conservative DoD requirements formula.

DoD Instruction 4140.42, "Determination of Requirements for Spare and Repair Parts Through the Demand Development Period," July 28, 1987, and DoD Directive 4140.59 establish policy for stocking items as either demand based or nondemand based and direct that each component develop criteria providing for limited stockage of nondemand-based items. One type of a nondemand-based item is numeric stockage objective items. DoD Instruction 4140.42 defines a numeric stockage objective item as an item that is essential to the operational capability of a weapon system for which some failure is predicted. However, expected failures of the item are not sufficient to justify stockage on the basis of demand.



DoD Directive 4140.59 provides guidance for computing the requirements objective for numeric stockage objective items, and for procuring numeric stockage objective items. The Directive does not authorize a safety level for numeric stockage objective items. The Directive specifies that the requirements objective (numeric stockage objective quantity) is:

The sum of the production lead time; administrative lead time; repair cycle, if applicable; and procurement cycle. Any protectable war-reserve or planned program requirements are additive. The procurement cycle shall be limited to 1 year. Numeric stockage objective items may be procured when the assets on-hand and on-order are equal to or less than the sum of the lead times.

The UICP System at ASO, however, did not compute requirements for low demand, reliable items on the basis of the DoD numeric stockage objectives criteria. Rather, requirements for low demand, reliable items were computed using a demand based stockage formula that included safety level stocks.

We recomputed requirements for four sampled items that had less than five demands per year and survival rates of at least 97 percent using the DoD guidance and formula. In each case, one asset was sufficient to support forecasted attrition during the procurement support period and the repair cycle requirement. We concluded that a numeric stockage objective of two assets would effectively support forecasted attrition and the repair cycle requirements for the items. The following table compares the UICP System computed requirements objective and the DoD numeric stockage objective for the four items.

<u>NSN</u>	<u>ASO Demand-Based Requirements Objective</u>	<u>DoD Numeric Stockage Objective</u>	<u>Unit Price</u>
1280-01-186-1434	4	2	\$ 11,066
1680-01-242-9698	4	2	16,889
7050-01-098-5523	3	2	106,587
4920-01-054-9326	3	2	9,875

The principal differences between ASO's requirements objective and requirements computed using the DoD formula were related to the safety level quantity and UICP System rounding of partial quantities for the requirement elements. Most of the excessive purchases were canceled during the audit.

Guidance for verification of requirements data. Item managers at ASO and SPCC initiated insufficient or excessive purchases for 15 of the 37 items primarily because the ICPs' guidance for verification of requirements data was not adequate. For these items, the item managers used erroneous requirements data and factors to forecast requirements.

ASO and SPCC guidance (for review of requirements data and factors used in the system generated purchase recommendation) did not require item managers to evaluate or verify significant data and factors before initiating purchases. The ICPs provided training to item managers on the evaluation of requirements data, and ICP policy assigned the item managers responsibility for the accuracy of certain data in the UICP System. However, these actions did not ensure that item managers used accurate requirements data to compute purchase requirements. Our review indicated that forecast demand rates and planned program requirements (such as retail and intermediate allowance and pack up kit requirements) were excessive, that repair survival rates were erroneous, and that applicable assets used in computations were understated. The deficiencies in the ICPs' guidance are discussed in the following paragraphs.

Verification of forecast demand rates. Transactions evidencing demands on the wholesale supply system and adjustment to those demands are recorded in transaction history files (THF) at the Navy ICPs. Those transactions include requisitions, requisition cancellations, referral orders, and certain issue and return transactions. The UICP System screens the THF transactions to identify recurring demands and uses those recurring demands to compute the demand rate. The UICP System uses demand codes, Navy defined project codes, and advice codes to differentiate between recurring and nonrecurring demands.

Neither the Navy Supply Systems Command nor the ICPs issued guidance that required item managers to evaluate demand rates and demand trends before initiating purchases. Additionally, there was no guidance to define the scope of such an evaluation. For example, there was no guidance on whether item managers should contact the requisitioner to verify the purpose of potentially nonrecurring or abnormal demands or to determine the basis of an apparent demand surge and whether that surge represented a sustained increase to demands.

Verifying Demand Transactions. Item managers did not verify the recurring nature of demand transactions before initiating purchases for 3 of the 15 items. For example, an item manager did not evaluate the demand transactions and adjust the demand rate for a centrifugal pump (NSN 4320-01-220-1747) before initiating two purchase requests for a total of 29 pumps, valued at \$1.1 million. This pump was used primarily by shore based maintenance activities to perform scheduled maintenance of

shipboard equipment. Demands from those activities should have been coded as program related nonrecurring demands because requirements to support the scheduled maintenance program were entered in the requirements system as planned program requirements by Planning and Engineering for Repairs and Alterations Command (PERA) activities. However, the activities performing the scheduled maintenance program erroneously reported the demands as recurring and the item manager did not recognize that the demands were program related nonrecurring demands. We concluded that 23 of the 29 pumps being procured were in excess of requirements at September 30, 1990. In March 1991, the item manager canceled one of the purchase requests for 10 pumps valued at \$380,000.

Analyzing Demand Trends. Item managers did not effectively analyze potential abnormal demand trends before initiating purchases for 2 of the 15 items. Such analysis is extremely important at ASO, because the ASO requirements system uses a 12-month program demand rate to forecast requirements. The 12-month demand base aggravated the volatility in requirements forecasts for some items. For example, an item manager initiated a purchase for 18 housing and inserts (NSN 1610-00-887-0392) valued at \$225,146 in September 1990. This item was used only by depot maintenance activities to overhaul the next higher assembly. ASO received nine demands from the depot activities in 1 quarter. Although demands in the previous 17 quarters had averaged only 2.5 demands per quarter, the item manager did not evaluate the basis for the potentially abnormal demands. We computed requirements using the average demand rate for the prior 20 quarters and concluded that the purchase was excessive. ASO terminated the purchase for the 18 housings in September 1991, because the higher demand rate was not sustained. At that time, the wholesale stockage requirement had decreased by 21 units.

Navy initiatives to improve item manager's ability to evaluate demand transactions and trends. The item manager's ability to evaluate demand transactions and trends was limited because the UICP System did not provide the item manager an effective tool for performing such an evaluation. The UICP System did not retain a history that identified the specific demand transactions used to compute the demand rate. Because the UICP System did not maintain a history of the demand transactions or an audit trail in the THF that accomplished that purpose, verifying demand data and analyzing trends was laborious and time-consuming. For instance, to evaluate demand transactions, the item manager had to first research the THF and attempt to identify recurring and nonrecurring demand transactions.

The Fleet Materiel Support Office, responsible for the design and programming of the UICP System, is developing an automated demand history product. The automated demand history product was undergoing operational testing in December 1992.

In addition, the Navy is attempting to provide item managers an automated system to improve demand forecasting. ASO developed the Supply Demand Forecasting System that is currently being implemented for consumable items. The Navy is planning to expand its use to reparable items by June 1993.

The Navy initiatives should provide the item managers with the automated tools needed to review demand rates for reparable items. However, we concluded that the automated system improvements would not ensure that demand rates are appropriate or reasonable unless item managers are provided guidance for and required to verify demand transactions and trends.

**Verification of planned program requirements.** In addition to the requirements forecast based on recurring demand, the Navy ICPs purchase assets to support planned program requirements. Planned program requirements include authorized stockage levels (such as retail and intermediate allowances, pack up kits, and authorized war reserve stocks) held by activities below the wholesale inventory level and the scheduled maintenance program requirements managed by the PERA. We concluded that item managers should have but did not verify the planned program requirements before initiating purchases for 4 of the 15 items.

**Aviation Supply Office.** At ASO, the Customer Operations Division is responsible for establishing and revising retail and intermediate allowance data in the UICP System. These allowances represent authorized stockage levels held by activities below the wholesale inventory level to support recurring end user demands.

ASO Policy and Procedures Memo No. 5B, "Validation of Retail Requirements and Wearout/Survival Rates," January 19, 1989, suspended validation of the retail requirements based solely on procurement dollar value. Item managers, however, were authorized to validate allowances or rates that appeared discrepant. We concluded that additional guidance was needed because item managers did not validate discrepant requirements.

For example, in July 1990, ASO initiated a purchase for 119 vector voltmeters (NSN 4920-01-220-4520) valued at \$2.6 million primarily to support retail allowances. During supervisory review of the purchase in November 1990, the purchase was reduced by 29 voltmeters. Supervisory review of the purchase reduced the recurring demand rate that the item manager used to forecast requirements. However, neither the item manager nor

supervisors verified the retail allowances for the voltmeter. Our review indicated that the maintenance replacement factor used to calculate the individual retail allowances was significantly overstated. We concluded that, after adjustment resulting from supervisory review, the sampled purchase was still excessive by 60 voltmeters. ASO reduced the planned program requirements for the item. However, the purchase was not canceled because assets were being delivered under the contract.

In another case, ASO initiated a purchase for three auxiliary test units (NSN 4920-01-251-7174) valued at \$180,000 to support retail and intermediate allowances. We questioned the need for the intermediate allowance quantities because ASO classified the test unit as an insurance item. ASO deleted the allowance requirements and canceled the purchase after verifying that the item was an insurance item.

Ships Parts Control Center. At SPCC, planned program requirements are computed by the equipment program manager or item manager and approved by the Materiel Program Budget Department. The approval (funding) of the requirement serves as authorization for the item manager to procure assets in support of the requirement. Our review indicated that planned program requirements were the principal cause of some excessive purchases. For example, an item manager was purchasing 12 Detecting-Ranging Set Subassemblies (NSN 5845-01-307-6466) valued at \$2.1 million. The purchase was based primarily on planned program requirements to field pack up kits for the AN/AQS-14 Sonar System. Pack up kits are kits of spare and repair parts to support deployed aircraft squadrons. However, the planned program requirement included two subassemblies for intermediate stock levels (one subassembly on each coast) which effectively duplicated the wholesale numeric stockage objective requirements for the subassembly. When we questioned the propriety of the intermediate stock levels, the program manager reduced the planned program requirements. However, the contract for the assemblies had been awarded and the purchase was not reduced.

Verification of wearout rates. The UICP System uses a wearout rate to forecast attrition during the procurement lead time and procurement cycle time periods. The wearout rate is calculated using the carcass return rate (percentage of recurring demands for which unserviceable assets are expected to be returned by field activities) and the survival rate.

Carcass Return Rates. Inappropriate carcass return rates were not the principal cause of excessive purchases, but contributed to two of the excessive purchases at SPCC.

During the audit, SPCC revised the process used to establish carcass return rates for high value items. Accordingly, we are not making any recommendations related to carcass return rates.

Survival Rates. Erroneous survival rates for items being repaired by commercial repair activities were the principal cause of insufficient and excessive purchases for 3 of the 15 items. Neither of the ICPs specified that item managers verify survival rates for commercially repaired items before initiating high value purchases or specified the amount of historic data needed to establish a representative survival rate.

At ASO, item managers could request the Customer Operations Division to validate the survival rate for items, including commercially repaired items, when the rate was suspect. However, the Customer Operations Division's validation was not always appropriate. For example, ASO was purchasing 111 rotary rudder blades (NSN 1615-01-158-9678) valued at \$2.9 million. At the time that the buy was initiated, the item manager requested the Customer Operations Division to verify the survival rate. The Customer Operations Division recommended that the item manager increase the survival rate from 90 to 99 percent. However, the Customer Operations Division's evaluation was inappropriate because it was based on repair observations for too short of a period. The analysis considered only the contractor's reported repair and condemnation actions for the active repair contract. The evaluation should have included prior repair experience. In May 1991, we asked management to reevaluate the survival rate. Management complied and determined that the survival rate should have been 78 percent instead of 99 percent and initiated a purchase for 129 additional blades.

Verification of applicable assets. SPCC initiated excessive purchases for 3 of the 15 items primarily because its guidance for verification of requirements before initiating purchases did not require the item manager to confirm asset balances in transit to or held by commercial repair activities and did not provide procedures for such a verification. Item managers understated applicable asset balances when they computed the purchase requirement because the UICP System asset balance did not include assets in transit to or held by a commercial repair activity.

For example, an item manager was purchasing 50 metallic valve disks (NSN 4820-01-090-6529) valued at \$144,750. Purchase requests for the disks were initiated and approved by management in September and November 1989. In addition, the ICPs' independent audit group reviewed the purchase in June 1990 and concurred with the purchase. The item manager's computation did not consider unserviceable assets held by the contractor performing depot level repair of the disks. The item manager should have considered the assets as materiel due in from repair

and reduced the purchase requirement accordingly. At our request, SPCC verified the contractor's May 1991 asset balance. At that time, the contractor had 136 disks on hand. Based on the forecast recovery of the 136 disks held by the contractor, the purchase was unnecessary. The contract for the sampled purchase could not be canceled. However, the item manager initiated action to terminate a follow-on purchase of the disk.

Naval Audit Service Report No. 027-N-90, "Management of Commercial Repair of Non-Aviation Material," January 30, 1990, reported that asset balances related to contractors were inaccurate at SPCC. SPCC issued Instruction 4400.58, "Commercial Repair Monthly Status Report," June 28, 1989, which specified that item managers use the monthly status report to verify asset balances. However, this instruction does not specify the frequency of the verifications or require that asset balances be verified before initiating purchases and awarding contracts. In addition, SPCC principle guidance for verifying requirements data and for supervisory approval of purchase decisions, (SPCC Weapon System Support Group Instruction 4400.23B, "Consumable and Depot Level Repairable (DLR) Supply Demand Review," October 25, 1985) was not revised to implement the new SPCC instruction.

**Management oversight.** The principal cause for 13 of the 37 insufficient or excessive purchases was that management oversight of item manager purchase decisions was ineffective. For these items, supervisory review of item manager purchase decisions did not discern that item managers had used erroneous requirements data, had understated applicable assets, or had not complied with existing guidance for computing the purchase requirement. In addition, supervisory review did not detect the 16 excessive and insufficient purchases, which we attributed to inadequate guidance for verification of requirements and asset data, or require item managers to obtain additional support for the requirements data used in the computation.

**ASO and SPCC supervisory review policy.** Both ASO and SPCC required supervisory review and approval of high value purchases. However, differences between the two review programs were significant. ASO established a dollar threshold of \$150,000 (48 of 54 sampled items) for review and approval of purchases by first line supervisors and \$2 million (22 of 54 sampled items) for review by higher level management. SPCC, on the other hand, required first line supervisory review and approval of purchases valued at \$50,000 or more (all of the 32 sample items) and higher level management approval of each purchase valued at \$200,000 or more (19 of 32 sampled items).

Another significant difference was that ASO permitted item managers to initiate purchases before obtaining supervisory approval while SPCC required that the supervisory review be completed before the purchase was initiated. In one instance at

ASO, the item manager's requirements computation was not submitted for supervisory review until 4 months after the purchase was initiated. The informality of ASO's review and approval process, when combined with document retention practices (discussed in Finding B) rendered no assurance that the appropriate management level had approved the purchase.

**Evaluation of supervisory reviews.** Supervisory reviews of 13 of the 37 excessive purchases were inadequate. Neither ASO nor SPCC supervisors discerned that item managers had erroneously computed requirements or that item managers had not complied with existing guidance for verifying requirements data and for computing purchase requirements. For example, an item manager at SPCC initiated the purchase of 22 circuit card assemblies (NSN 5999-01-255-1816) valued at \$110,000. The item manager incorrectly computed the provisioning demand rate (28 demands per year) used to compute the purchase requirement. The appropriate demand rate was two demands per year. Supervisory review of the item manager's computation did not detect the erroneous demand rate.

We also concluded that the supervisory review and approval process at the ICPs did not implement the intent of DoD policy for management of high cost insurance items. Insurance items are items that are not expected to fail through normal usage. DoD policy permits stockage of the items in minimum quantities because if a failure is experienced or loss occurs, the lack of a replacement would seriously impact the operational readiness of a weapon system. DoD Directive 4140.59 specifies that the stockage level shall not exceed two replacement units. Additional guidance for purchasing insurance items is provided in DoD Directive 4140.40, "Provisioning of End Items of Materiel," June 28, 1983. This Directive required upper management levels to evaluate and approve the purchase of high cost insurance items (unit price in excess of \$50,000).

ICP policies for review and approval of item manager purchase decisions did not require upper level management to approve purchases for high cost insurance items. For example, an item manager at ASO initiated the purchase of one ejection seat (NSN 1680-01-159-9153) valued at \$130,314. Supervisory approval of the purchase was not required. The item manager was acquiring an additional ejection seat to fill the computed stockage level of two seats. Because there were no demands for the seat during the 5 years before October 1990, we questioned the item manager's justification for purchasing the additional seat. The item manager subsequently canceled the purchase.

We believe that purchase decisions for high cost insurance items should be approved at upper management levels of the ICPs based on item essentiality and the investment associated with the stockage levels.



**ASO and SPCC independent review groups.** In addition to the supervisory review process, both ASO and SPCC established an independent review group within their Materiel Budget Department. The independent review groups audited high value purchases. The objectives of the independent review were to ensure compliance with existing policy and guidance, evaluate the adequacy of existing guidance and instructions, and verify the accuracy of the computation. The review also included evaluation of the technical aspects of the item, the consistency of requirements factors, and the propriety of planning and program data. The ASO and SPCC independent review groups reported significant cost savings as a result of their review of purchase decisions. During the 12-month period preceding our audit, purchases reviewed by the groups were reduced by approximately 18 percent.

The independent review groups, however, did not detect many of the excessive purchases discussed in this report. We attributed this to the lack of clear guidance for verification of requirements data, discussed on page 12, and to limitations imposed on the review groups. ASO policy required the audit of all purchases valued at over \$2 million and randomly selected purchases of lesser value. SPCC policy required the audit of all purchases valued at \$200,000 or more and randomly selected purchases of lesser values. However, neither of the independent review groups were sampling and reviewing the lower value purchases. For example, the ASO Materiel Budget Department could provide only two audit reports for purchases valued at less than \$2 million during 1990 and 1991. ASO cited manpower limitations as the reason for not sampling those purchases.

We concluded that the ICPs' independent review groups did not serve as a significant internal control over the propriety of purchase decisions, because the review groups did not sample and review lower value purchases. As a result, the review groups did not provide assurance to upper level management that the ICPs' item managers and supervisory personnel were complying with existing policies and guidance for requirements determination or that existing guidance was effective.

**Continuation of purchases when requirements decreased.** We attributed the excessive purchases on 3 of the 37 sampled items to ineffective procedures and controls for reevaluation of purchases prior to contract award.

In December 1989, the Assistant Secretary of Defense (Production and Logistics) issued a memorandum, "Contract Terminations of Secondary Items No Longer Needed." The memorandum provided,

It is DoD policy to reduce or cancel orders (purchase requests) prior to contract award and to consider reducing or terminating

contracts after award when changes in mission, consumption factors, etc., make all or a part of the material ordered unneeded. The ICPs should establish procedures to manage, monitor, and audit termination actions within the activity. The procedures should provide for appropriate records to ensure accountability of termination decisions and the coordination of termination actions across functions. Termination decisions should be reached and implemented in a timely manner.

Neither of the Navy ICPs established a formal program to reevaluate purchase quantities before contract award. Instead, the ICPs relied on the UICP Systems' supply demand review and budget stratification processes to identify potential excessive purchases. The UICP System was programmed to compare forecast requirements and applicable assets and to generate a notice recommending that the item manager reduce potentially excessive purchase.

The supply demand review and budget stratification processes effectively recognized potentially excessive purchases resulting from fluctuations in demand rates and revisions of planned program requirements entered in the UICP System. Excessive purchases for seven items in our sample were curtailed based on the item manager's review of the UICP System's recommended notices during the September 1990 budget stratification process. The audit estimates of premature and unnecessary purchases were reduced by \$26 million to recognize these actions.

The UICP System, however, did not identify other excessive purchases because it cannot recognize excessive purchases caused by inaccurate estimated demand rates or erroneous planned program requirements. Additionally, the UICP System cannot recognize excessive purchases caused by inaccurate asset balances. Those conditions can only be detected by effective manager review and correction of requirements data. Accordingly, we concluded that the existing processes were not sufficient to satisfy the intent of the DoD termination policy.

The ICPs did not have controls to ensure that purchase requests were actually reduced based on the item manager's decisions or that the item manager's decisions were appropriate. At ASO, item manager decisions to reduce purchases for two sample items were not acted upon. For example, the item manager recomputed requirements and decided to reduce the purchase for a torque sensor (NSN 4920-01-054-9326) from 23 to 15 in October 1990. However, the purchase was not reduced and a contract was awarded for the 23 sensors on January 11, 1991. When we questioned the need for purchasing 23 sensors, neither the item manager nor

supervisory personnel could explain why the purchase was not reduced. ASO initiated a contract termination to reduce the contract by nine sensors valued at \$67,266 in April 1991.

Furthermore, item managers' decisions to reduce or cancel purchases were not always appropriate. For example, in October 1990, the item manager canceled the purchase request for 11 roll drive amplifiers (NSN 1280-01-186-1434) valued at \$121,726 without any rationale. The UICP System merely recommended reducing the purchase to eight amplifiers. In October 1991, the item manager initiated the purchase of five amplifiers. The item manager's decision to cancel the purchase delayed acquisition of the materiel and may affect future support of Navy customers if the materiel is not received in time to satisfy customer demands.

#### RECOMMENDATIONS, MANAGEMENT COMMENTS, AND AUDIT RESPONSE

1. We recommend that the Chief of Naval Operations:

a. Establish procedures for the hardware systems commands to advise the inventory control points when weapon system program changes and engineering design changes will impact requirements for reparable items.

b. Establish procedures for the inventory control points to verify requirements data for high value items when requirements forecasts should be revised due to changes in weapon system programs, engineering design, and provisioning estimates, and to ascertain asset availability, before initiating purchases.

Management comments. The Navy partially concurred with the recommendations. The Navy identified policies, procedures, and mechanisms that are in place to foster communication between the Navy HSCs and ICPs. The comments concluded that the Navy must focus on process improvements centering on the timeliness and accuracy of the information flow concerning interim and installation spares between the HSCs and ICPs.

Audit response. We consider the Navy's comments to be partially responsive. The Navy did not provide specific information on actions to be taken or the implementation dates. We believe that processes such as verification of requirements data before initiating purchases and awarding contracts would improve the propriety of purchase decisions and identify weaknesses in the information flow requiring further management attention. We therefore request that the Navy reconsider its position and provide a response to this final report including a description of the corrective actions to be taken and the estimated completion date.

2. We recommend that the Commander, Naval Supply Systems Command:

a. Direct the Aviation Supply Office to implement DoD policy and formula for numeric stockage objective items to forecast requirements for low demand, reliable reparable items.

Management comments. The Navy nonconcurred with the recommendation stating that the Navy is fully complying with DoD policy governing requirements determination for low demand, reliable items. The Navy believes the DoD instruction allows the Navy the prerogative to decide whether an item should be managed as demand based or nondemand based. The Navy decided to manage items with one or more forecasted demands per year as demand based and installed that policy in the ICP software system. The Navy adopted this policy because it provided greater protection against an out-of-stock position for items for which demands might be infrequent but which were essential to the operation of supported weapon systems.

Audit response. The Navy's practices do not implement the intent of DoD policy. DoD Instruction 4140.42 does not specify the demand frequency that an item should experience to be classified as demand based. Rather, the instruction directs that items be classified as demand based according to economic criteria and supply performance. It is not sufficient to make a one-time determination during provisioning as to whether an item will always be managed as demand based. DoD Instruction 4140.59 requires that demand based items be reviewed annually to ensure current applicability of the existing classification, and specifies that items failing to meet the criteria for demand based stockage are to be reclassified as numeric stockage objectives or nonstocked items. Operators of the Navy's UICP System at ASO do not perform an economic analysis to determine an item's classification and whether an item should continue to be stocked in the Navy system as demand based. We request that the Navy reconsider its position and provide a response to this final report.

b. Direct the inventory control points to issue consolidated instructions governing item managers' verification of requirements data before initiating high value purchases. These should include guidance for verification of recurring demand rates, planned program requirements, survival rates, and asset balances for assets in transit to or held by commercial repair activities.

Management comments. The Navy concurred with the recommendation and provided an estimated completion date of March 1, 1993.

**Audit response.** The actions being taken satisfy the intent of the recommendation. Additional comments are not required.

c. Direct the inventory control points to revise their policies to provide for supervisory review of item manager purchase decisions for high cost insurance items at upper levels of management.

**Management comments.** The Navy partially concurred with the recommendation and acknowledged that the audit identified weaknesses in the review process that must be improved. The Navy stated that the \$50,000 threshold for review of purchase recommendations for insurance items is too low.

**Audit response.** We consider the Navy's comments to be partially responsive. Although the Navy agreed that controls over the approval of purchases for high cost insurance items need to be strengthened, it did not identify corrective actions that will be taken or implementation dates. Additionally, the Navy provided no information to support the contention that the \$50,000 threshold was too low. We request that the Navy describe corrective actions and the completion dates.

d. Direct the inventory control points to conduct periodic evaluations of the adequacy of supervisory review of item manager purchase decisions, and use those evaluations in assessing supervisory performance.

**Management comments.** The Navy concurred with the recommendation and identified actions being taken to implement the recommendation.

**Audit response.** The actions being taken satisfy the intent of the recommendation. However, we request that the Navy identify the planned implementation date.

e. Direct the inventory control points to expand the coverage of the independent review function to include sampling lower value purchases.

**Management comments.** The Navy concurred with the recommendation. It agreed to expand the coverage of independent reviews by including sampling of lower value purchases.

**Audit response.** The actions being taken satisfy the intent of the recommendation. However, we request that the Navy identify the planned implementation date.

f. Direct the inventory control points to establish programs implementing the DoD policy to reevaluate purchases prior to contract award and terminate purchases that are no longer needed.

**Management comments.** The Navy nonconcurred with the recommendation stating that the Navy ICPs review each outstanding purchase and contract several times during its existence. The Navy further stated that the results of its current review procedures reflect the adequacy of the procedures.

**Audit response.** We considered the Navy's comments to be nonresponsive. As stated in the report, we believe that existing procedures are not sufficient. In many cases, requirements data recorded in the UICP System were inaccurate and the UICP System processes would not recommend curtailing the purchase until the data were corrected. We continue to believe that a thorough reevaluation of requirements before contract award represents a significant and needed internal control over the ICP purchases. We request that the Navy reconsider its position and provide a response to this final report.

#### **Other Management Comments**

**Premature and unnecessary purchases.** The Navy disagreed with the classification of several items as premature or unnecessary or with the quantities of several items classified as premature or unnecessary purchases.

**Audit response.** We revised audit estimates contained in this final report based on additional information provided by and discussions with Navy personnel. Those discussions encompassed each item that the audit classified as excessive in our draft report. We did not revise the estimates for items related to requirements for low demand, reliable items; verification of demand data for items affected by demand surges; and management oversight of purchases for high cost insurance items.

**Potential monetary benefits.** The Navy nonconcurred with the reported potential monetary benefits. The Navy believes that the results of audit reflect more on the timing of the audit than on any management inefficiencies. The Navy indicated that the ICPs' management processes, inventory levels, and funding were affected by two major events in September 1990. Those events, Program Budget Decision 436 and Operation Desert Shield/Storm caused a significant increase in workload and contributed directly and substantially to the environment in place at the time of the audit. While the Navy concurs that the audit identified excessive purchase, it believes that the ICPs would have identified and corrected the purchases. The Navy contends that any projection of savings based on an audit conducted during the September 1990 timeframe is unwarranted.

**Audit Response.** We disagree with the Navy's contentions that the ICPs' management controls and processes would have detected and corrected the excessive purchases and that projected savings based on an audit conducted during the September 1990 timeframe is unwarranted. The Navy's responses to our recommendations generally confirm weaknesses in guidance for verification of requirements data and management oversight of item manager decisions to initiate or continue purchases in process. Moreover, during the audit, naval activities curtailed purchases valued at \$22.1 million in response to our audit. Our review did not indicate that Operation Desert Shield/Storm was responsible for the conditions and inappropriate purchases that we identified; therefore, we do not believe it represents a reasonable basis for not projecting savings. Accordingly, we request that the Navy reconsider its opinion on the estimated monetary benefits and provide a response to this final report.

#### STATUS OF RECOMMENDATIONS

<u>Number</u>	<u>Addressee</u>	<u>Response To Final Report Should Cover</u>				<u>Related Issues</u> <sup>1/</sup>
		<u>Concur/ Nonconcur</u>	<u>Proposed Action</u>	<u>Completion Date</u>		
A.1.a.	CNO <sup>2/</sup>	X	X	X		IC, M
A.1.b.	CNO	X	X	X		IC, M
A.2.a.	NAVSUP <sup>3/</sup>	X	X	X		M
A.2.b.	NAVSUP	N/R <sup>4/</sup>	N/R	N/R		IC, M
A.2.c.	NAVSUP	N/R	X	X		IC, M
A.2.d.	NAVSUP	N/R	N/R	X		IC, M
A.2.e.	NAVSUP	N/R	N/R	X		IC, M
A.2.f.	NAVSUP	X	X	X		IC, M

<sup>1/</sup> IC - internal controls, M - monetary benefits

<sup>2/</sup> Chief of Naval Operations

<sup>3/</sup> Naval Supply Systems Command

<sup>4/</sup> No further response required

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**B. RETENTION OF REQUIREMENTS DATA SUPPORTING PURCHASE DECISIONS AND DOCUMENTATION EVIDENCING SUPERVISORY APPROVAL OF THOSE DECISIONS**

Item managers at ASO and SPCC could not provide requirements data supporting over 50 percent of the purchase requests related to the sampled items. This internal control weakness occurred because the ICPs' guidance for retention of the requirements data was inadequate and not enforced. The lack of documentation made it difficult for item managers and supervisory personnel to provide the rationale for purchase decisions, increased the audit effort required to evaluate purchases and determine the underlying cause of some excessive purchases, and precluded a thorough evaluation of supervisory oversight and approval of item manager purchase decisions.

**DISCUSSION OF DETAILS**

**Background**

The GAO 1983 "Standards for Internal Controls in the Federal Government," requires that the basis for transactions, such as a purchase request, be clearly documented and that the documentation be available for examination by persons responsible for verifying the transaction.

This internal control deficiency was previously reported in GAO Report No. NSIAD-90-111 (OSD Case No. 8216), "Defense Inventory: Growth in Navy Ship and Submarine Parts," March 1990, and in IG, DoD, Report No. 91-106, "Military Department Requirements for Currently Procured Wholesale Inventories of Consumable Items," June 28, 1991. In September 1991, the Naval Supply Systems Command issued guidance to the ICPs for retention of requirements data that satisfied the intent of the prior audit recommendations. However, as discussed below, additional action is needed.

**Evaluation of Document Retention Policy and Practices**

As of September 30, 1990, item managers at ASO and SPCC had initiated 123 purchase requests for the 86 sample items. Requirements data supporting 71 of the 123 purchase requests were not retained by the item manager. Additionally, documentation evidencing the appropriate supervisory approval was not available for 74 of the purchase requests.

Document retention policy and practices were different at the two Navy ICPs. The following table summarizes the document retention practices at the Navy ICPs.

	<u>ASO</u>	<u>SPCC</u>	<u>Total</u>
Sample items	54	32	86
Purchase requests	65	58	123
Purchase requests for which requirements documents were not available for review	45	26	71
Purchase requests for which evidence of supervisory approval at the specified management level was not available for review	46	28	74

On September 30, 1990, ASO policy and implementing instructions did not provide specific guidance for retention of requirements documents supporting purchase and termination decisions. However, in November and December 1991, ASO issued guidance for retention of requirements documents supporting purchase decisions (ASO Instruction 4205.9J, "Auditing and Approval of ASO Requirements Determination Actions") and termination decisions (ASO Instruction 4440.1, "Excess On Order Contract Termination Processing"). These Instructions require item managers to retain requirements documents supporting purchases until the materiel being purchased is received and to retain for 2 years requirements documents supporting a purchase termination.

We concluded that the guidance issued by ASO satisfies the intent of the GAO standards and accordingly, we are not recommending that ASO revise or supplement that guidance. However, we believe that management oversight is needed to ensure that item managers comply with the guidance.

SPCC policy specified that requirements data be retained in support of purchase decisions. SPCC Weapon System Support Group Instruction 4400.23B, "Consumable and Depot Level Repairable Supply Demand Review," October 1985, requires item managers to retain approved forms along with consolidated stock status reports, cyclic data sheets, and any other supporting data, until the materiel being procured is received. Although the SPCC Instruction provides specific guidance for retention of requirements data supporting purchase decisions, item managers

did not comply with the retention policy. Additionally, the SPCC Instruction inappropriately permits item managers to dispose of requirements data after termination action is completed.

#### RECOMMENDATIONS FOR CORRECTIVE ACTION

1. We recommend that the Commander, Ships Parts Control Center, revise document retention policy. The policy should require item managers to retain requirements data supporting the reduction or termination of purchases for 2 years after management approves the action.

2. We recommend that the Commander, Aviation Supply Office and the Commander, Ships Parts Control Center, direct their respective independent review functions to periodically review document retention practices to ensure that item managers are complying with the policies.

#### MANAGEMENT COMMENTS AND AUDIT RESPONSE

Management comments. The Navy concurred with the recommendations and identified corrective actions being taken to implement the recommendations.

Audit response. Actions being taken are responsive; and additional comments are not required.

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PART III - ADDITIONAL INFORMATION

- APPENDIX A - Statistical Sampling Plan and Results
- APPENDIX B - Summary of Items Sampled Involving Excessive and Insufficient Purchases
- APPENDIX C - Underlying Causes of Excessive and Insufficient Purchases
- APPENDIX D - Prior Audit Coverage
- APPENDIX E - Summary of Potential Benefits Resulting from Audit
- APPENDIX F - Activities Visited or Contacted
- APPENDIX G - Report Distribution

## APPENDIX A. STATISTICAL SAMPLING PLAN AND RESULTS

Procurements in process were recorded in computer files at Navy ICPs. We requested the ICPs to extract data from the files and provide us computer tapes identifying all procurement actions that had been initiated, but for which a contract had not been awarded as of September 30, 1990. At that time, the ICPs procured both consumable and reparable items with stock fund monies. Therefore, we extracted procurement actions for national stock numbered items that the ICPs classified as depot level reparable. The data we were provided showed that on September 30, 1990, the Navy ICPs had procurements in process for 11,308 reparable items, valued at \$863 million.

We limited our review to a sample universe of 1,430 line items involving active purchase requests, valued at \$691.1 million. Our analysis of the procurements in process indicated that the 1,430 line items, with procurements valued at \$100,000 or more, represented approximately 13 percent of the items being procured but accounted for approximately 80 percent of the value of the procurements. In addition, the Navy's inventory management policies generally required greater management intensity for those higher value items, assigned more experienced inventory management personnel to those items, and required supervisory approval of the procurements at higher management levels.

We used a multi-stage sampling plan that incorporated stratified sampling methodologies. Our initial sample was 107 line items, with purchase requests valued at \$229.4 million. The sample was drawn from a universe of 1,430 line items with purchases in process, valued at \$691.1 million. We adjusted the sample universe to 1,056 line items involving purchases valued at \$520.1 million, to reflect corrections of the quantity assigned to a purchase; to recognize quantity reductions that were in process when we obtained the sample universe; to recognize contracts that were awarded before our sample cutoff dates; and to exclude items that were classified as depot level reparable but managed using consumable item management techniques. Adjustments to our initial sample of 107 line items resulted in a final audit sample of 86 line items involving purchases valued at \$188.3 million. The sample results were projected with a 95 percent confidence level and a sampling precision of  $\pm 3$  percent for dollars.

We estimated that materiel purchases valued at \$110.9 million, exceeded authorized stockage objectives. The estimates of premature and unnecessary purchases were adjusted downward to recognize the reduction of excessive purchases by the ICPs, based on requirements data on September 30, 1990. The ICPs' actions were generally based on item manager review of a UICP System recommendation to reduce the purchase, supervisory review of the

## APPENDIX A. STATISTICAL SAMPLING PLAN AND RESULTS (cont'd)

purchase decision, or HSC direction to curtail the purchase. These ICP actions reduced the audit projection of premature and unnecessary purchases by about \$46.0 million. Of the \$110.9 million of excessive purchases, we estimated that \$32.1 million was for premature purchases and \$78.8 million was for unnecessary purchases. We classified procurements as premature if the quantity procured exceeded the stockage objective by more than 12 months of forecast requirements. The value of the premature purchase, however, was the value of materiel in excess of the stockage objective for up to 5 years of forecasted requirement. We classified procurements that were in excess of 5 years of forecasted requirements as unnecessary.

The audit tests were designed to evaluate the active purchases and to render an opinion on the reasonableness of the quantities being procured at that time in relation to stockage policies and objectives. We were not able to render an opinion on the reasonableness of purchases for 11 of the 86 sampled items valued at \$35.6 million. For those 11 items, either the ICP could not provide verifiable requirements data as of September 30, 1990, or requirements were dependent on a critical management decision by the Navy HSC, and that decision had not been made. We estimated that of the \$520.1 million of purchases in process, the reasonableness of purchases valued at \$69.5 million was not determinable as of September 30, 1990.

The items reviewed and premature and unnecessary purchases used in the statistical projections are summarized below for each ICP.

### Summary of Items Reviewed and Excessive Purchases by Inventory Control Point

<u>Inventory Control Point</u>	<u>Items Reviewed</u>		<u>Premature and Unnecessary Purchases</u>	
	<u>Number of Items</u>	<u>Extended Value (Million)</u>	<u>Number of Items</u>	<u>Extended Value (Million)</u>
Aviation Supply Office	54	\$141.9	15	\$ 9.2
Ships Parts Control Center	<u>32</u>	<u>46.4</u>	<u>13</u>	<u>8.9</u>
Total	<u>86</u>	<u>\$188.3</u>	<u>28</u>	<u>\$18.1</u>



APPENDIX B. SUMMARY OF ITEMS SAMPLED INVOLVING EXCESSIVE AND INSUFFICIENT PURCHASES

National Stock Number	Excessive Purchase		Reduction Prior to Audit		Reduction During Audit	
	Quantity	Value	Quantity	Value	Quantity	Value
<u>Aviation Supply Office</u>						
1615-01-201-9639	94	\$13,666,416	94	\$13,666,416 A/	25	\$1,537,200 1/ C/
1650-01-277-8238	23	1,414,224 B/			114	4,791,712 C/
5960-LL-NEE-A190	114	4,791,712 D/				
1615-01-201-9601	44	6,397,046	44	6,397,046 A/		
1560-01-155-7014	69	3,035,373	69	3,035,373		
4920-01-124-9246	22	2,602,380 E/	1	118,290	21	2,484,090 F/
4920-01-220-4520	89	1,966,544	29	640,784		
5855-01-052-6849	8	1,854,008			3	695,253 F/
4920-01-156-1393	15	1,793,355 D/ E/			10	1,195,570 C/
4920-01-124-9245	5	756,580	13	1,967,108		
1620-01-177-1891	24	584,929 E/			23	560,557 F/
1560-01-300-7768	15	1,095,489	18	1,314,587		
1740-01-062-1657	23	530,969	14	323,199	24	554,055 C/
5841-01-004-7531	19	532,418	19	532,418		
2925-01-277-3508	72	1,122,028			72	1,122,028 C/
6605-01-027-4172	6	278,231 D/			10	463,719 F/
5963-01-154-2794	65	1,994,278				
1280-01-095-2982	13	1,095,848			14	1,180,144 C/
1560-01-284-5093	6	76,166			12	126,943 C/
6615-01-183-7413	12	71,160				
5999-01-271-1243	31	163,895	31	163,895		
4920-01-251-7174	3	180,000			3	180,000 C/
1610-00-887-0392	18	225,146			18	225,146 F/
4920-01-054-9326	9	88,875			9	88,875 C/

Footnotes are explained on last page of appendix.

**APPENDIX B. SUMMARY OF ITEMS SAMPLED INVOLVING EXCESSIVE AND INSUFFICIENT PURCHASES**  
(cont'd)

National Stock Number	Excessive Purchase		Reduction Prior to Audit		Reduction During Audit	
	Quantity	Value	Quantity	Value	Quantity	Value
<u>Aviation Supply Office (continued)</u>						
1280-01-186-1434	5	55,330	11	121,726		
1680-01-242-9698	4	67,559	3	50,669		
7050-01-098-5523	1	106,587			1	106,587 C/
1680-01-159-9153	1	130,314			1	130,314 C/
1680-01-175-9116	9	<u>79,920 D/</u>				
ASO Totals		<u>\$46,756,780</u>		<u>\$28,331,511</u>		<u>\$15,442,193</u>
<u>Ships Parts Control Center</u>						
5895-01-281-2401	72	3,456,000			80	3,840,000 C/
2010-01-111-9593	3	3,536,817 B/			3	3,536,817 2/ C/
1420-01-108-5915	34	1,556,894			35	1,602,685 C/
5999-00-619-7838	31	1,488,000			16	768,000 C/
4320-01-220-1747	23	874,000			10	380,000 C/
5845-01-307-6466	2	350,000				
6130-01-155-2338	15	225,215			15	225,215 C/
5820-00-334-8407	78	391,092 E/			47	235,658 C/
5999-01-255-1816	22	110,000			22	110,000 C/
2010-01-222-5283	4	482,030			3	361,523 C/
4820-01-090-6529	50	144,750			17	49,215 C/
5865-01-164-1509	144	\$ 343,008 E/	47	\$111,954 B/		
2990-01-134-6899	90	157,419 E/				
5998-01-183-7818	3	<u>93,767</u>			4	125,022 F/
SPCC Totals		<u>\$13,208,992</u>		<u>\$111,954</u>		<u>\$11,346,089</u>

Footnotes are explained on last page of appendix.

APPENDIX B. SUMMARY OF ITEMS SAMPLED INVOLVING EXCESSIVE AND INSUFFICIENT PURCHASES  
(cont'd)

	<u>Insufficient Purchase</u>		<u>Purchase Initiated</u>	
	<u>Quantity</u>	<u>Value</u>	<u>In Response to Audit</u>	<u>Quantity</u>
<u>Aviation Supply Office</u>				
1615-01-158-9678	111	\$2,902,650 D/	129	\$ 3,373,350
7021-01-283-3749	6	1,146,958 D/	74	10,237,738
1620-01-158-5958	56	<u>203,274 D/</u>	75	<u>450,000</u>
Total		<u>\$4,252,882</u>		<u>\$14,061,088</u>

1/ Based on replacement price of follow-on purchase

2/ Based on NAVSEA price that excluded Government-furnished materials

A/ HSC decision resulted in purchase reduction

B/ Excessive quantity related to a purchase by the ICP or HSC that was initiated after September 30, 1990

C/ Reduction resulted from action taken in response to audit

D/ Excessive or insufficient purchase was not used to estimate premature and unnecessary purchases because verifiable requirements data were not available to evaluate the reasonableness of the purchase on September 30, 1990.

E/ Excessive quantity related to the sampled purchase and a follow-on purchase by the ICP

F/ Reduction resulted from ICP action

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**APPENDIX C. UNDERLYING CAUSES OF EXCESSIVE AND INSUFFICIENT PURCHASES**

**Excessive Purchases ASO**

<u>National Stock Number</u>	<u>Cause(s)</u>
1615-01-201-9639	Requirements forecasts were not adjusted to recognize reliability improvement resulting from design change. Backorders and wearout rate were overstated.
1650-01-277-8238	Assets acquired by NAVAIR were inappropriately excluded from the requirements computation.
5960-LL-NEE-A190	Estimated demand rate was not adjusted based on experiential data from the interim contractor support period.
1615-01-201-9601	Requirements forecasts were not adjusted to recognize reliability improvement resulting from design change. Backorders were overstated.
1560-01-155-7014	Supervisory review of the purchase decision reduced the purchase.
4920-01-124-9246	Planned program requirements decreased after the purchase was initiated; however, the purchase was not reduced. A duplicate purchase was initiated.
4920-01-220-4520	Retail and intermediate allowances were excessive because the maintenance replacement factor was overstated.
5855-01-052-6849	Planned program requirements decreased and related backorders were excessive.
4920-01-156-1393	Applicable assets were understated and outdated requirements data were used to compute the purchase quantity.
4950-01-124-9245	Management review of the purchase decision corrected overstated planned program requirements and reduced the purchase.

**APPENDIX C. UNDERLYING CAUSES OF EXCESSIVE AND INSUFFICIENT PURCHASES (cont'd)**

<u>National Stock Number</u>	<u>Cause(s)</u>
1620-01-177-1891	Demand rate was overstated. The item manager did not review a demand surge.
1560-01-300-7768	Demand rate and planned program requirements were overstated because requirements between related items (family relationship) were not properly considered. Management canceled the purchase.
1740-01-062-1657	Demand rate was overstated because demand transactions from other Military Departments were erroneous.
5841-01-004-7531	Assets increased as a result of ship decommissionings. Management reduced the purchase.
2925-01-277-3508	Planned program requirements and related backorders were not adjusted to recognize decreased requirements resulting from NAVAIR modification program.
1605-01-027-4172	Survival rate was understated.
5963-01-154-2794	UICP System asset balance related to assets being repaired by the contractor were understated when management approved the buy.
1280-01-095-2982	Requirements decreased after the life-of-type buy was initiated. However, the purchase was not reduced.
1560-01-284-5093	Stockage level was overstated because requirements for related items were improperly consolidated. Retail and intermediate allowances and related backorders were overstated.
6615-01-183-7413	Planned program requirements were overstated.

**APPENDIX C. UNDERLYING CAUSES OF EXCESSIVE AND INSUFFICIENT PURCHASES (cont'd)**

<u>National Stock Number</u>	<u>Cause(s)</u>
5999-01-271-1243	Item should not have been cataloged and entered into wholesale inventory. Item manager canceled purchase.
4920-01-251-7174	Inadequate justification for the purchase of high cost insurance item.
1610-00-887-0392	Demand rate was overstated. The item manager did not review a demand surge.
4920-01-054-9326	Requirements decreased after the purchase was initiated. However, the purchase was not reduced.
1280-01-186-1434	Requirements decreased after the purchase was initiated. The item manager reduced the purchase.
1680-01-242-9698	Requirements decreased after the purchase was initiated. The item manager reduced the purchase.
7050-01-098-5523	Requirements exceeded DoD stockage objective for numeric stockage objective item.
1680-01-159-9153	Inadequate justification for the purchase of high cost insurance item.
6680-01-175-9116	UICP System asset balance related to assets being repaired by a contractor were understated. The survival rate was also understated.

**Excessive Purchases SPCC**

5895-01-281-2401	Applicable assets, retail allowances, and the estimated demand rate were not adjusted for Weapon System Program Change (ship decommissionings). Erroneous provisioning survival rate and carcass return rate were used.
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**APPENDIX C. UNDERLYING CAUSES OF EXCESSIVE AND INSUFFICIENT PURCHASES (cont'd)**

<u>National Stock Number</u>	<u>Cause(s)</u>
2010-01-111-9593	NAVSEA initiated a purchase that duplicated the SPCC purchase.
1420-01-108-5915	Estimated demand rate used to compute requirements was not justified.
5999-00-619-7838	Assets due-in from the Air Force were understated. The demand rate was overstated and the survival rate was understated.
4320-01-220-1747	Demand rate was overstated because nonrecurring demands from PERA were classified as recurring demands.
5845-01-307-6466	Intermediate stock levels duplicated the SPCC numeric stockage objective.
6130-01-155-2338	Planned program requirements were overstated and the carcass return rate was understated.
5820-00-334-8407	Survival rate was understated, repair cycle time was overstated, and assets due-in from repair were excluded from the purchase computation.
5999-01-255-1816	Provisioning demand rate and related planned program requirements were overstated.
2010-01-222-5283	Survival rate was understated.
4820-01-090-6529	Asset balances related to assets being repaired by a contractor were understated. The demand rate was overstated because nonrecurring demands from PERA were classified as recurring demands.
5865-01-164-1509	Assets in transit to the repair contractor were understated.



APPENDIX C. UNDERLYING CAUSES OF EXCESSIVE AND INSUFFICIENT PURCHASES (cont'd)

<u>National Stock Number</u>	<u>Cause(s)</u>
2990-01-134-6899	Asset balances related to assets being repaired by the contractor were understated. The demand rate was overstated because nonrecurring demands from PERA were classified as recurring demands.
5998-01-183-7818	Estimated demand rate used to compute requirements was not justified.

Insufficient Purchases

1615-01-158-9678	Survival rate was overstated.
7021-01-283-3749	Management was purchasing assets for only the AV-8B aircraft. Requirements for F-18 aircraft were excluded from the requirements computation.
1620-01-158-5958	The item manager reduced the sampled purchase and did not initiate a purchase in response to UICP System purchase recommendation.

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#### APPENDIX D. PRIOR AUDIT COVERAGE

IG, DoD, Report No. 90-010, "Summary Report on the Audits of Contract Terminations," November 21, 1989, summarized the results and status of actions the Military Departments were taking to implement the recommendations for three audits on contract terminations: Report No. 89-063, "Contract Terminations at Army Inventory Control Points," March 29, 1989; Report No. 88-153, "Contract Terminations at the Navy Aviation Supply Office," May 23, 1988; and GAO Report No. GAO/NSIAD-87-141 (OSD Case No. 7242), "Military Procurement: Air Force Should Terminate More Contracts for On-Order Excess Spare Parts," August 12, 1987. Report No. 90-010 concluded that the Military Departments' ICPs made uneconomical termination decisions. The main reason for the uneconomical decisions was the lack of policies and procedures on how to make decisions. The report recommended that DoD establish specific policies and procedures related to contract terminations. On December 13, 1989, the Assistant Secretary of Defense (Production and Logistics) issued guidance for termination of contracts when secondary items are no longer needed.

Naval Audit Service Report No. 027-N-90, "Management of Commercial Repair of Non-Aviation Material," January 30, 1990, reported that supply records at SPCC did not accurately reflect the quantity of materiel sent to commercial activities for repair. The report estimated that \$16.3 million in costs could be avoided. Numerous recommendations were made related to improving the reliability of asset data at ASO. SPCC agreed to issue an instruction to formalize the periodic verification of inventory of commercial activities. However, the instruction was not issued.

Naval Audit Service Report No. 060-N-90, "Report on the Visibility, Accountability, and Control of Aviation Depot Level Repairables Undergoing Commercial Repair." September 20, 1990, reported that assets sent to commercial repair centers were not always visible on ASO's supply records and could not be accurately accounted for on ASO's financial records. The report concluded that \$67.8 million of unnecessary procurements could be avoided if supply records were corrected. Numerous recommendations were made related to improving the reliability of asset data at ASO. The recommendations and issues involving cost avoidances were forwarded to the Chief of Naval Operations for resolution.

GAO Report No. NSIAD-91-176 (OSD Case No. 8645), "Defense Inventory: Shortcomings in Requirements Determination Processes," May 1991, summarized deficiencies in DoD's inventory requirements determination processes for secondary items identified in 97 reports issued by GAO; IG, DoD; Army Audit Agency; Naval Audit Service; and Air Force Audit Agency during

#### APPENDIX D. PRIOR AUDIT COVERAGE (cont'd)

the last 6 years. GAO reported that DoD and the Military Departments generally agreed with the findings and recommendations contained in the 97 reports and have taken many actions to remedy the deficiencies.

GAO reported that DoD developed and began implementation of an inventory reduction plan that management officials believe addresses the problems in the requirements determination processes. The plan is producing good initial results.

IG, DoD, Report No. 91-106, "Military Department Requirements for Currently Procured Wholesale Inventories for Consumable Items," June 28, 1991, reported that the Military Departments' ICPs were prematurely and unnecessarily purchasing consumable items. As it related to the Navy, we recommended that the Naval Supply Systems Command revise guidance for verification of requirements before initiating purchases, to include specific procedures and techniques for verifying requirements data. We also recommended that the Navy issue guidance specifying requirement factors that must be evaluated during supervisory review of purchase decisions. The Navy maintained that existing guidance and procedures for requirements determination and for independent audit of purchase actions were adequate and satisfied the intent of the recommendation. However, the Navy agreed to perform inspections at both ICPs beginning in October 1991 to cover all aspects of ICP operations that could contribute to the procurement of unneeded stocks.

IG, DoD, Report No. 92-001, "Demand Data for Secondary Items," October 8, 1991, reported that controls over the classification and recording of demand data were inadequate. The report identified approximately \$127.6 million of inaccurate demand data. Of the \$127.6 million, \$125.8 million was for nonrecurring demands that were erroneously coded as recurring demands. The report recommended that procedures and internal controls be established or revised to ensure that demand data are properly classified and reported. Management concurred with the recommendations.

IG, DoD, Report No. 92-118, "Air Force Requirements for Currently Procured Wholesale Inventories of Repairable Items," June 30, 1992, reported that the Air Force was prematurely or unnecessarily purchasing \$93.8 million of repairable items. We recommended that the Air Force revise or supplement guidance for computing additive requirements, strengthen internal controls over purchase decisions, and establish an automated system to retain a 2-year demand history. The Air Force generally concurred with the recommendations. Action taken by the Air Force and the Assistant Secretary of Defense (Production and Logistics) satisfied the intent of the recommendations.

# APPENDIX E. SUMMARY OF POTENTIAL BENEFITS RESULTING FROM AUDIT

<u>Recommendation Reference</u>	<u>Description of Benefits</u>	<u>Amount and/or Type of Benefit</u>
A.1. and A.2.	<u>Economy and Efficiency.</u> Avoid premature or unnecessary purchase of wholesale inventory by the Navy ICPs.	<u>Funds Put to Better Use.</u> About \$68.2 million* of Navy Stock Fund monies pertaining to the sample universe and \$3.5 million of appropriated funds for other Navy procurements (17x1810) related to purchases of sampled items that were not part of the sample universe could be put to better use.
A.1.a., A.1.b., A.2.b., A.2.c., A.2.d., A.2.e., A.2.f., B.1., and B.2.	<u>Internal Control.</u> Ensure that item managers retain the requirements documents to support their decision to initiate or curtail purchases.	<u>Nonmonetary.</u>

\* The potential monetary benefits do not include an estimate for avoiding costs related to the premature purchases because those costs were not readily determinable. The \$68.2 million represents the value of unnecessary purchases of \$78.8 million, adjusted for the costs that would be incurred to repair unserviceable assets. When excessive quantities of new assets are available in inventory, unserviceable assets need not be repaired. Thus the cost of repairing unserviceable assets can be avoided.

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## APPENDIX F. ACTIVITIES VISITED OR CONTACTED

### Office of the Secretary of Defense

Assistant Secretary of Defense (Production and Logistics),  
Supply Management Policy, Washington, DC

### Department of the Navy

Headquarters, Naval Air Systems Command, Washington, DC  
Headquarters, Naval Sea Systems Command, Washington, DC  
Headquarters, Space and Naval Warfare Systems Command,  
Washington, DC  
Headquarters, Naval Supply Systems Command, Washington, DC  
Naval Aviation Supply Office, Philadelphia, PA  
Ships Parts Control Center, Mechanicsburg, PA  
Fleet Materiel Support Office, Mechanicsburg, PA  
Navy Publications and Forms Center, Philadelphia, PA  
Naval Aviation Depot, Cherry Point, NC  
Naval Aviation Depot, Norfolk, VA  
Naval Aviation Depot, San Diego, CA  
Naval Audit Service, Arlington, VA  
Naval Depot Operations Center, Patuxent River, MD  
Planning and Engineering for Repairs and Alterations Command,  
Philadelphia, PA

### Department of the Air Force

Oklahoma City Air Logistics Center, Tinker Air Force Base, OK  
Sacramento Air Logistics Center, McClellan Air Force Base, CA

### Defense Logistics Agency

Defense Reutilization and Marketing Service, Battle Creek, MI

### Contractor

Allied-Signal Aerospace Company, Phoenix, AZ

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## APPENDIX G. REPORT DISTRIBUTION

### Office of the Secretary of Defense

Assistant Secretary of Defense (Production and Logistics)  
Assistant Secretary of Defense (Public Affairs)  
Comptroller of the Department of Defense

### Department of the Navy

Secretary of the Navy  
Assistant Secretary of the Navy (Financial Management)  
Auditor General, Naval Audit Service

### Department of the Air Force

Air Force Audit Agency

### Defense Agencies

Director, Defense Contract Audit Agency  
Director, Defense Logistics Agency  
Director, Defense Logistics Studies Information Exchange  
Office of the Inspector General, Defense Intelligence Agency

### Non-DoD Activities

Office of Management and Budget  
U.S. General Accounting Office  
National Security and International Affairs Division,  
Technical Information Center  
National Security and International Affairs Division,  
Director for Logistics Issues

Chairman and Ranking Minority Member of the following  
Congressional Committees and Subcommittees:

Senate Subcommittee on Defense, Committee on Appropriations  
Senate Committee on Armed Services  
Senate Committee on Governmental Affairs  
House Committee on Appropriations  
House Subcommittee on Defense, Committee on Appropriations  
House Committee on Armed Services  
House Committee on Government Operations  
House Subcommittee on Legislation and National Security,  
Committee on Government Operations

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PART IV - MANAGEMENT COMMENTS

Department of the Navy

MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY




THE ASSISTANT SECRETARY OF THE NAVY  
(Research, Development and Acquisition)  
WASHINGTON, D.C. 20350-1000

DEC 03 1992

MEMORANDUM FOR THE DEPARTMENT OF DEFENSE INSPECTOR GENERAL  
(ASSISTANT INSPECTOR GENERAL FOR AUDITING)

Subj: DRAFT REPORT ON THE AUDIT OF NAVY REQUIREMENTS FOR  
CURRENTLY PROCURED WHOLESALE INVENTORIES OF REPAIRABLE  
ITEMS (PROJECT NO. OLE-0078.03) - ACTION MEMORANDUM

This memorandum is in reply to TAB A requesting Navy  
comments on the subject report. We have reviewed it and have  
provided our comments as TAB B. We appreciate the opportunity  
provided to comment on the draft report.

  
Gerald A. Cann

Copy to:  
NAVINGEN  
NAVCOMPT (NCB-53)

TAB A - DODIG Memorandum of 15 Sep 92 (Project No. OLE-0078.03)  
TAB B - Department of the Navy response to DODIG Draft Audit  
(OLE-0078.03)

MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY (cont'd)

DEPARTMENT OF THE NAVY RESPONSE  
TO  
DODIG DRAFT REPORT OF 15 SEPTEMBER 1992  
ON  
NAVY REQUIREMENTS FOR CURRENTLY PROCURED WHOLESALE INVENTORIES  
OF REPAIRABLE ITEMS  
(PROJECT NO. OLE-0078.03)

INTRODUCTORY MANAGEMENT COMMENTS

Before we can address the specific details of the audit, it is important to understand the chronology of events occurring at the time of the audit in September 1990. Program Budget Decision (PBD) 436 and Desert Shield/Storm were two major events that occurred during this time period which significantly impacted Navy's wholesale inventory management processes, inventory levels, and funding. They contributed directly and substantially to the environment in place at the time of the audit.

In fiscal year 1990, Navy began to take aggressive actions to reduce inventory levels in anticipation of force reductions. To set a clear course of action, the Navy Comptroller in January 1990 withheld approximately \$550 million in FY90 obligation authority. In order to execute given this reduction, the two Navy Inventory Control Points, Naval Aviation Supply Office (ASO) and Navy Ships Parts Control Center (SPCC), reduced and/or eliminated over \$1.8 billion in inventory requirements. These actions included a \$1.25 billion reduction in lead time demand, safety levels, and economic order quantities, a \$173 million elimination of geographic support levels, and a \$265 million requirements reduction and asset application for scheduled decommissionings.

These reductions were later mandated in March 1990, for all Services, through the Office of the Secretary of Defense's (OSD) PBD 436. The total PBD 436 reduction in Navy obligation authority was actually \$1.05 billion, applied over FY90 and FY91. By March 1990, most of the \$1.8 billion requirement reductions were reflected in the ICPs' files. Management of an inventory system subjected to such a large and sudden requirements change was a monumental challenge. The effort to bring assets and requirements back into balance translated into an enormous and unprecedented increase in item management manual workload. Each item's total requirement had to be recomputed. Once that was completed, contracts and purchase requests had to be identified, located, and modified/canceled. The result of this effort was that each ICP devoted the vast majority of its productive item manager resources during this period to efforts other than routine files maintenance. Consequently, much of the day-to-day tasks had to be deferred. It is important to note that item management "catch-up" was still ongoing during the audit.

MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY (cont'd)

Near-term increases to inactive inventory on-hand and for purchase requests and contracts were expected and unavoidable. As item managers brought assets and requirements back into balance, an extraordinary degree of procurement churn was experienced. Purchases had to be reduced or completely canceled that were in the procurement pipeline in support of requirements that had suddenly been eliminated. As a point of fact, in FY90 more than \$700 million in purchase requests and contracts were terminated.

The success of this massive realignment of assets to greatly reduced requirements is best measured by Navy's reduction of procurements for inactive inventory. In the one-year period following March 1990 Navy reduced by 38 percent, to virtually zero, the percentage of contracts and purchase requests for inactive inventory. That this could be accomplished at all is noteworthy; that it took only a year is extraordinary. That an audit, conducted half-way through this effort, found that there was still work to be done is self-evident.

The other event that further exasperated the item management process, beginning in August 1990, was Operation Desert Shield/Desert Storm. At the end of FY90, Desert Shield/Storm became an increasingly important focus of the ICPs. Faced with a surge in demand based on a greatly increased operations tempo, Navy's logistics strategy for the wholesale system was to expedite our way through the war. This applied equally to customer requisitions, new procurements, and repair actions. Every backordered requisition marked for Desert Shield/Storm support was manually reviewed and tracked. For contracts, since the items managed by the Navy ICPs (i.e., highly complex, weapons system-specific) generally have long production lead times, the strategy was to expedite those procurements already in production. As with the effort required to balance assets and requirements after PBD 436, expediting requisitions and contracts is extremely labor-intensive. A large share of the burden fell on the item manager. Thus, during the September 1990 stratification process, the time period the auditors allowed for and expected validation of requirements and assets for purchase requests in process, significant item manager resources at each ICP were devoted to direct support of the war effort vice routine, yet extremely important, item management tasks.

The ICP Automated Data Processing (ADP) system provides few tools or capabilities for managing large, sudden requirements changes. Furthermore, the ICPs are not staffed to assume large surges in manual workload, such as was experienced in FY90 and the beginning of 1991. The results of this audit reflect more on the timing of the audit than on any management inefficiencies. A better evaluation of Navy's performance in minimizing excessive purchases is DOD's measurement of the percentage comparison of excessive procurements to valid procurements. Using this

MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY (cont'd)

criteria, Navy has consistently been identified by OSD as the service with the model program and best performance.

However, the best indicator of Navy's performance in eliminating excessive procurements is reflected in the 1992 Congressional Authorization Bill in which the Services were assigned reductions for "excess on order" totaling \$400 million. Army's portion was \$250 million, Air Force's portion was \$150 million, and Navy's portion was zero. No other component of DoD takes the issues outlined in this audit more seriously and no one has achieved more in eliminating the very circumstances that the audit found existed in September 1990.

We concur that the audit found purchase requests for excess quantities during our clean-up after PBD 436 and during Desert Shield/Storm. We believe that these excessive purchases would have been identified and corrected by the ICPs. We submit that any projection of savings based on an audit conducted during this time period is unwarranted and we nonconcur with the potential monetary benefits of \$91.3 million.



MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY (cont'd)

MANAGEMENT COMMENTS ON RECOMMENDATIONS

Section A. INSUFFICIENT, PREMATURE, AND UNNECESSARY PURCHASES OF REPAIRABLE ITEMS

Recommendation 1.a.

The Chief of Naval Operations establish procedures for the HSCs to advise the ICPs when weapon system program changes and engineering design changes will impact requirements for repairables items.

Recommendation 1.b.

The Chief of Naval Operations establish procedures for the ICPs to verify requirements data for high value items when requirements forecasts should be revised due to changes in weapon system programs, engineering design, and provisioning estimates; and to ascertain asset availability, before initiating purchases.

Management Comments

Partially Concur. Based on the sampled items, it is apparent that the Navy needs to continue to improve the process of transitioning interim and installation spares from the HSC to the ICP. However, Navy policy and procedures are in place to cover this process. OPNAVINST 4423.4A implements DoD policy relative to secondary item stockage and requirements determination. This instruction designates the Naval Supply Systems Command as the lead Systems Command for matters related to secondary item requirements determination and the Program Support Data process. NAVSUPINST 4420.36 specifies policy and procedures for Program Support Data to be utilized in determining the requirements for interim, initial and follow-up secondary items (spares) at the ICPs.

The communication and coordination between the ICPs and the HSCs is key to effective and economical weapons systems support. There is a number of formal mechanisms now in place to foster effective communication. Examples include:

a. The existence of formal Integrated Logistics Support Management Teams (ILSMTs). These teams are established to support key weapons systems, and consist of representatives from the HSC, the ICP, various engineering field activities, the depot level maintenance community and the Fleets. These groups meet regularly and publish formal agendas, minutes and action items. They exist to bring the organizations responsible for various elements of the logistics process together as an integrated team.

b. The existence at each ICP of dedicated Weapons/Platform/Program managers. These individuals serve as the

MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY (cont'd)

liaison between the HSC and the ICP item manager, ensuring that each is kept informed of important developments in the program (e.g., pending Engineering Change Proposals (ECP), program changes, schedule changes, etc.).

c. Formal participation by ASO in the NAVAIR configuration control process. An ASO representative participates as a non-voting member of the NAVAIR Configuration Change Board (CCB), which approves all ECPs. Prior to the CCB, ECPs are staffed through the cognizant ASO item manager and equipment specialist, who provide information such as current asset positions and pending procurement to the Board. After ECP approval by the CCB, cost and funding and milestone plans are provided to the cognizant ASO Weapons Branch. These identify funding to be used for implementation of the ECP and provide timely information on fielding of the ECP. These documents are typically provided to ASO two to three years in advance of actual installation, providing adequate lead time to adjust procurement if necessary.

Using the policies and mechanisms described above, Navy must focus on process improvements centering on the timeliness and accuracy of the information flow concerning interim and installation spares between the HSCs to the ICP.

Recommendation 2.a.

The Commander, Naval Supply Systems Command direct the Naval Aviation Office to implement DoD policy and formula for numeric stockage objective items to forecast requirements for low demand, reliable repairable items.

Management Comment

Nonconcur. The draft report properly cites DoD Instruction 4140.42, "Determination of Requirements for Spare and Repair Parts Through the Demand Development Period," July 28, 1987, and DoD Directive 4140.39, "Determination of Requirements for Secondary Items After the Demand Development Period," June 13, 1988, as the relevant DoD policy governing stockage of low demand items. As cited in the draft, these documents direct that items be classified as either demand-based or nondemand-based, and specifies separate stockage policy for each. However, the draft report goes on to identify a specific criterion for distinguishing the two categories: specifically, demand-based items are those that experience five or more demands a year, while nondemand-based items are those that experience fewer than five demands per year. Using this criterion, the draft report identifies several items whose requirements were overstated because they were being managed as demand-based rather than nondemand-based items.

MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY (cont'd)

DoD Instruction 4140.42 delegates to each Service the responsibility for defining specific criteria for distinguishing nondemand-based and demand-based items. Because many Navy-managed repairables experience relatively infrequent demand but are highly essential to the operation of the supported weapons system, Navy designates items with more than one forecasted demand per year as demand-based items. This policy is embedded in the ICP software system.

Navy fully complies with DoD policy governing stockage of low demand items and the requirements for such items in the DODIG sample are not overstated. Therefore, the associated purchase requests were not excessive to the Navy's requirements.

Recommendation 2.b.

The Commander, Naval Supply Systems Command direct the ICPs to issue consolidated instructions governing item manager's verification of requirements data before initiating high value purchases. These should include guidance for verification of recurring demand, planned program requirements, survival rates, and asset balances for assets in transit to or held by commercial repair activities.

Management Comment

Concur. The Commander, Naval Supply Systems Command will so direct the Navy ICPs. Estimated completion date is 1 March 1993.

Recommendation 2.c.

The Commander, Naval Supply Systems Command direct the ICPs to revise their policies to provide for supervisory review of item manager purchase decisions for high cost insurance items at upper levels of management.

Management Comment

Partially Concur. Navy ICP policies contained in SPCC's Weapons Systems Support Group Instruction 4400.23B and ASO Instruction 4205.9J clearly establish and document required levels of review and approval of purchase requests. Each ICP has established a formal review hierarchy. The level of review, up to and including review by the ICP Commanding officer, depends on the extended value of the purchase request. Navy's approach is to invest our review and verification efforts in direct proportion to the dollar value of the recommended purchase action. Thus, high dollar value purchase recommendations receive more attention than low dollar value recommendations. We believe the \$50,000 threshold for review of purchase recommendations for insurance

MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY (cont'd)

items is ~~to~~ too low. Navy believes current review and approval policies are extensive and well-documented, but we acknowledge the audit has identified weaknesses in the review process which must be improved.

Recommendation 2.d.

The Commander, Naval Supply Systems Command direct the ICPs to conduct periodic evaluations of the adequacy of supervisory review of item manager purchase decisions, and use those evaluations in assessing supervisory performance.

Management Comment

Concur. Commander, Naval Supply Systems Command will so direct the Navy ICPs and will evaluate each ICP's progress during periodic Command evaluations.

Recommendation 2.e.

The Commander, Naval Supply Systems Command direct the ICPs to expand coverage of the independent review function to include sampling lower value purchases.

Management Comment

Concur. Navy agrees with expanding coverage of the independent review function to include sampling lower value purchases.

Recommendation 2.f.

The Commander, Naval Supply Systems Command direct the ICPs to establish programs implementing the DoD policy to reevaluate purchases prior to contract award and terminate purchases that are no longer required.

Management Comment

Nonconcur. Each Navy ICP currently reviews each outstanding purchase request and outstanding contract several times during its existence. Each stratification review, performed twice yearly, and each termination Supply Demand Review project requires the evaluation of each outstanding purchase request and contract. Where requirements and/or assets have changed since the document's initiation and termination is economically justified, termination recommendations are brought to the item manager's attention. The Navy's performance in the requirements management area, as measured by the current extraordinarily low value of purchase requests and contracts that exceed

MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY (cont'd)

requirements, as well as by the number of terminations requests generated and executed, clearly documents the attention of the Navy ICPs and the adequacy of existing programs.

Section B. RETENTION OF REQUIREMENTS DATA SUPPORTING PURCHASE DECISIONS AND DOCUMENTATION EVIDENCING SUPERVISORY APPROVAL OF THOSE DECISIONS

Recommendation 1

The Commanding Officer, Navy Ships Parts Control Center revise document retention policy. The policy should require item managers to retain requirements data supporting the reduction or termination of purchases for 2 years after management approves the action.

Management Comment

Concur. The ICP automated Item Manager Workstations are the means by which Navy will satisfy this recommendation. The policy will be established by 1 February 1993.

Recommendation 2

The Commanding Officer, Naval Aviation Supply Office and the Commanding Officer, Navy Ships Parts Control Center direct their respective independent review functions to periodically review document retention practices to ensure that item managers are complying with the practices.

Management Comment

Concur. This review process will be established at each ICP by 1 February 1993.

MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY (cont'd)

MANAGEMENT COMMENTS ON SAVINGS PROJECTIONS

During preliminary discussions concerning the draft report, Navy and the DODIG were able to categorize individual sample items into five categories:

- a. Items that Navy and DODIG agree should be recategorized as either not premature or as non-projectable based upon either new information or a different interpretation of earlier information.
- b. Items that Navy contends, but DODIG disagrees, should be recategorized as not premature or as non-projectable. Dispute arises over either interpretation of or adequacy of existing documentation.
- c. Items that Navy contends should be recategorized as not premature or as non-projectable based upon our contention that Navy policy and practice are fully in compliance with DoD policy and guidance.
- d. Items that Navy agrees had excessive or premature procurements, for specific causes that existed at the time of the audit, but have been remedied since the time of the audit sample.
- e. Items that Navy agrees had excessive or premature procurements, as identified in the draft report.

The following amended Appendix B (from the draft report) reflects Navy's position on the sampled items. Items falling into category a. have been changed to reflect the Navy/DODIG agreement. These items are indicated by the G/footnote. Items falling into categories b. and c. have been changed to reflect the Navy position, and are indicated by one of three footnotes, H/, I/ or J/. H/ and I/ correspond to the two areas of policy disagreement between Navy and DODIG, while J/ identifies disputed items. Items falling into category d. are annotated with the footnote K/. They are included in Navy's revised estimate of the projected value of purchases exceeding requirements, but should not be used to project monetary benefits. Items falling into category e. are unchanged from the original Appendix B. They are included in both in Navy's revised estimate of the projected value of purchases exceeding requirements.

Several items fall into category b., where Navy and the DODIG disagree. This is generally attributable to questions over interpretation of existing documents or judgements concerning the adequacy of substantiating documents. It is further exacerbated by the extraordinary length of time between the completion of the

MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY (cont'd)

audit field work and the distribution of the draft report. Over the course of the intervening 18 months, many documents pertinent to specific issues in question that were available in March 1991 are simply no longer available. Some of these documents are those that the DODIG correctly claims should have been retained to substantiate original purchase decisions. Others, however, would not ordinarily be retained even under the document retention policy recommended by DODIG. Lack of these documents forces questions whose answers could have been known with certainty and documented in March 1991 to become objects of speculation, postulation, deductive reasoning and proof by assertion in November 1992.

- Item 4920-01-220-4520 was determined by DODIG to have excess purchase quantities because the replacement rate was overstated, leading to inflated retail allowance quantities. The item, a piece of test equipment, requires replacement under two conditions: when it fails, or when it requires calibration by a depot maintenance facility. The replacement rate used to compute the retail allowance quantities reflects both reasons for replacement. Navy contends that these computations properly reflect retail requirements. DODIG claims that this position has not been adequately substantiated.

Category c. identifies items where policy issues dictate whether or not purchases should be considered excessive. There are two such policy areas at issue. The first area concerns designation of nondemand-based items. As noted in the DON comments on the related finding, DODIG contends that DoD policy (as contained in the DoD Instruction 4140.41 and DoD Directive 4140.39) requires the Services to use the following criteria for distinguishing demand-based from nondemand-based items: items that experience, or are forecasted to experience, five or more demands per year are to be managed as demand-based, while all other non-insurance items are to be managed as nondemand-based items. DoD policy actually delegates to each Service responsibility for defining appropriate criteria, and the Navy's criterion sets the demand-based threshold at one or more demands per year (for high essentiality items and items so designated in the approved maintenance plan). This criterion is appropriate for Navy because many such items, which experience relatively infrequent attrition demand (not necessarily total demand) are critical to the operation of the weapons system to which they apply. In the revised Appendix B, these items are identified by the footnote H/.

- The second area of disagreement concerns the Navy's demand forecasting policy and techniques. The DODIG contends that a five year average is appropriate for forecasting repairables demand. The Navy ICP policy allows item manager discretion, but generally relies on either a one year average or a weighted

**MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY (cont'd)**

moving average. In the case of the particular items chosen in the audit sample, the item managers were faced with a recent increase in demands in combination with growth in outstanding backorders. Given the information available at the time, and taking into account Operation Desert Shield/Storm, the item manager's decisions on these items were appropriate and defensible. In the revised Appendix B, these items are identified by the footnote I/.

A number of actions have been taken at the Navy ICPs during the previous three years to strengthen business practices. A number of items discovered in the sample to be discrepant were attributable to causes that have since been addressed by such actions. These items comprise category d. above and are identified by footnote K/.

- One area of weakness revealed by the audit was lack of visibility of assets held at contractor facilities for repair, leading to understating of assets in the requirements computation. To improve this process, SPCC developed the Commercial Asset Visibility (CAV) Reporting System and ASO developed the Contractor Asset Material Management System (CAMMS). These systems mechanize the reporting of such assets from contractor facilities, thereby gaining accurate information on asset status. Such status was previously unavailable to the item manager or only by unreliable, largely manual efforts. As of September 1992, approximately 80 percent of the dollar value of SPCC repair contracts include the requirement for the contractor to report asset under CAV. Three items noted as discrepant at SPCC, (5820-00-334-8407, 4829-01-090-6529 and 5820-00-334-8407) and one at ASO (5936-01-154-2794) were cited for commercial repair asset visibility problems. All of these items required largely manual tracking at the time of the audit, while three of the four are reported via CAV or CAMMS today. The combination CAV/CAMMS system has been adopted by the JLSC as a NTI, and is currently being prepared for export to all Services.

- Another weakness noted by the auditors was the difficulty experienced by item managers in efficiently collecting all the information needed to verify the correctness of purchase requests. Data resides in several locations; some are available via on-line inquiry, while some require batch retrieval, some is already summarized in a convenient form, and some are available only in raw form. This situation leads to obvious difficulties in assembling correct and complete information, all pertinent to the same epoch, in time frames adequate to support proper validation of the purchase decisions. Each ICP has made great strides in developing tools to improve this process. Generically referred to as Item Manager Workstations, these efforts consist of mechanizing as much of the data collection and synthesis process as possible. An early application of these efforts is ASO's SDF tool. Although targeted primarily toward addressing



MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY (cont'd)

the demand forecasting problem, it can also allow us to gather all the pertinent historical demand information, in both raw and summarized form, and make it available for item manager review in a useful and convenient form. SPCC has also developed this same capability, targeted at the broader item manager requirements of Supply Demand Review processing. As of September 1992, approximately 50 percent of the SPCC item managers are using IMW, with the remainder scheduled for FY93. As mentioned previously, a very useful parallel to this development is the capability to record electronically the information that was used to support purchase decisions. The recognition of this capability is widely accepted within DoD, and a NTI designed to incorporate these workstation capabilities and export them to each DoD ICP is currently under development under the Automated Item Management System (AIMS). This system is ultimately intended to provide all the capabilities discussed here and more.

A revised Appendix B, which follows, has been updated to reflect Navy's position on each of the items categorized in the draft report as other than reasonable. Based upon the extraordinary circumstances existing at the time of the audit (outlined in the Preamble section of our response) it is Navy's position that it is unreasonable to view the ICP's performance at the time of the audit as either typical or representative. The conditions documented in the draft report are reflective of the unprecedented circumstances acting on the ICPs and the extraordinary efforts taken by them to cope with those circumstances. The draft report does not shed light on the quality of Navy ICP performance under conditions even remotely resembling typical, and only under such conditions can quantifiable conclusions be drawn or projections be made about future performance or savings. We submit that any projection of savings based on an audit conducted during this time period is unwarranted and we nonconcur with the potential monetary benefits of \$91.3 million.

MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY (cont'd)

APPENDIX B. SUMMARY OF ITEMS SAMPLED INVOLVING EXCESSIVE AND INSUFFICIENT PURCHASES									
National Stock Number	Excessive Quantity	Purchase		ICP Reduction Prior to Audit		Reduction During Audit		Quantity	Value
		Value		Value		Value			
Aviation Supply Office									
1615-01-210-9639	94	\$13,666,416 G/				94	\$13,666,416 A/		
1650-01-277-8238	23	1,414,224 B/				25	1,537,200 I/		C/
5960-LI-NEE-A190	114	4,791,712				114	4,791,712 C/		
1615-01-201-9601	44	6,397,046 G/				44	6,397,046 A/		
1560-01-155-7014	69	3,035,373		69	3,035,373				
4920-01-124-9246	22	2,602,380 D/		1	118,290	21	2,484,090 E/		K/
4920-01-220-4520	89	1,966,544 J/		29	640,784	3	695,253 E/		
5855-01-052-6849	8	2,085,759 G/				10	1,195,570 C/		
4920-01-156-1393	15	1,793,355 F/	D/						
4920-01-124-9245	5	756,580		13	1,967,108	23	560,557 E/		
1620-01-177-1891	24	584,929 I/							
1560-01-300-7768	15	1,095,489		18	1,314,587	8	184,685 C/		
1740-01-062-1657	23	715,654 G/		15	530,969				
5841-01-004-7531	19	532,418		19	532,418				
2925-01-277-3508	72	1,122,028				72	1,122,028 C/		
6605-01-027-4172	6	278,231 F/				10	463,719 E/		
5963-01-154-2794	65	1,994,278 J/				14	1,180,144 C/		
1280-01-095-2982	13	1,095,848				12	126,943 E/		
1560-01-284-5093	6	76,166 J/							
6615-01-183-7413	12	71,160 G/							
5999-01-271-1243	31	163,895		31	163,895	3	180,000 E/		
4920-01-251-7174	3	180,000 H/				18	225,146 E/		
1610-00-887-0392	18	225,146 I/				9	88,875 E/		K/
4920-01-054-9326	9	88,875							

Footnotes are explained on last page of appendix.

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Footnotes are explained on last page of appendix.

**MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY (cont'd)**

**APPENDIX B. SUMMARY OF ITEMS SAMPLED INVOLVING EXCESSIVE AND INSUFFICIENT PURCHASES (cont)**

<u>National</u>	<u>Excessive Purchase</u>	<u>ICP Reduction</u>	<u>Reduction</u>
<u>Stock Number</u>	<u>Quantity</u>	<u>Prior to Audit</u>	<u>During Audit</u>
		<u>Quantity</u>	<u>Value</u>
<u>Aviation Supply Office (continued)</u>			
1280-01-186-1434	5	11	\$121,726
1680-01-242-9698	4	3	50,669
7050-01-098-5523	1		
1680-01-159-9153	1	1	130,314
1680-01-175-9116	9		
			\$106,587 E/

Ships Parts Control Center

5895-01-281-2401	72	\$3,456,000	80	\$3,840,000 C/
2010-01-111-9593	3	3,536,817 B/	3	3,536,817 Z/ C/
1420-01-108-5915	29	1,327,939 G/	35	1,556,894 C/
5999-00-619-7838	31	1,488,000	16	768,000 C/
4320-01-220-1747	23	874,000	10	380,000 C/
5845-01-307-6466	2	350,000		
6130-01-155-2338	15	225,215	15	225,215 C/
5820-00-334-8407	77	386,078 D/	47	235,658 C/ K/
5999-01-255-1816	22	110,000	22	110,000 C/
2010-01-222-5283	4	482,030	3	361,523 C/
4820-01-090-6529	50	144,750	17	49,215 C/ K/
5865-01-164-1509	144	343,008 D/		
2990-01-134-6899	90	157,419 D/		
5998-01-183-7818	3	93,767	4	125,022 E/

Footnotes are explained on last page of appendix.

**MANAGEMENT COMMENTS: DEPARTMENT OF THE NAVY (cont'd)**

**APPENDIX B. SUMMARY OF ITEMS SAMPLED INVOLVING EXCESSIVE AND INSUFFICIENT PURCHASES (cont)**

	<u>Insufficient Purchase</u>		<u>Purchase Initiated in Response to Audit</u>	
	<u>Quantity</u>	<u>Value</u>	<u>Quantity</u>	<u>Value</u>
<u>Aviation Supply Office</u>				
1615-01-158-9678	111	\$ 2,902,650 <u>E/</u>	129	\$ 3,373,350
7021-01-283-3749	6	1,146,958 <u>E/</u>	74	10,237,738
1620-01-158-5958	56	203,274 <u>E/</u>	75	450,000
<p>1/ Based on replacement price of follow-on purchase</p> <p>2/ Based on NAVSEA price that excluded Government-furnished materials</p> <p>3/ HSC decision resulted in purchase reduction</p> <p>4/ Excessive quantity related to a purchase by the ICP or HSC that was initiated after September 30, 1990</p> <p>5/ Reduction resulted from action taken in response to Audit</p> <p>6/ Excessive quantity related to the sampled purchase and a follow-on purchase by the ICP</p> <p>7/ Reduction resulted from ICP action</p> <p>8/ Excessive or insufficient purchase was not used to estimate premature and unnecessary purchases because verifiable requirements data were not available to evaluate the reasonableness of the purchase on September 30, 1990.</p> <p>9/ Changes reflected in the table mutually agreed upon by DODIG and Navy during review of draft report</p> <p>10/ Draft report incorrectly identified purchase quantity as excessive or premature due to incorrect contention that Navy practices violated OSD nondemand-based item management policy.</p> <p>11/ Draft report incorrectly identified purchase quantity as excessive or premature due to incorrect contention that Navy demand forecasting methods violate OSD policy</p> <p>12/ Facts surrounding the circumstances of the item at the time of audit in dispute.</p> <p>13/ Excesses discovered at time of audit attributable to specific causes that have been corrected since that time.</p>				

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